Celotex National Advertising Tells Them

NOW IS THE TIME TO BUILD *

This is a typical home-loving American couple. For years they have wanted to own a home. They have a little money saved up—enough to build, with today's easy financing and low interest rates. They would like to build for the satisfaction there is in it. And they would like to put their savings in a secure investment. Now they have decided, and they're going to act.

These people live right in your community. What has prompted them to act right now? A combination of circumstances, probably—the circumstances which are being mentioned in every Celotex national advertisement this fall. At any rate, they have been reading those Celotex advertisements with a lot of interest.

Eight out of ten such people know the Celotex name and quality reputation. When you provide Celotex Guaranteed Insulation, they know you're giving them full protection against fuel waste—against cold drafts and excessive summer heat, at minimum cost. Permanent protection, too; guaranteed in writing for the life of the building! (When issued, applies only within Continental United States.)

NOW IS THE TIME TO BUILD!
It is a hedge against the future • Financing rates are low • Interest rates are low • Materials cost less than they will later on • Labor is still available.

THE CELOTEX CORPORATION
919 N. Michigan Ave., Chicago, Ill.

Please have someone call to give me all the latest facts about Celotex Building Products.

Name
Address
City
County State

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Here's a Distinctive Floor
ALL HOME BUILDERS CAN AFFORD

The floor you put into a home is the background for the interior architecture and appointments. Don't slight it! And it does not have to be an expensive floor to provide rich, lustrous beauty that stands up under the wear and tear of everyday use. It can be Bruce STREAMLINE Floor, machine-finished at the factory, installed like ordinary strip flooring, and with a cost usually less than flooring finished on the job. No costly delays for floor finishing. Ready for use when the last nail's driven in! Its beauty will capture the heart of the most fastidious owner; the slight bevel at ends and sides present a distinctive "patterned" appearance usually associated only with the most expensive floors. Comes 25/32" thick with 3½" face. Its Bruce-Way finish (not a surface-finish but integral with the wood) is easy to maintain. If there's any one thing that will "sell" a house, it's a Bruce STREAMLINE FLOOR. Write for complete details today!

E. L. BRUCE CO.
1502 Thomas Street,
Memphis, Tenn.
Local Tax Policies

DURING recent months we have discussed on this page certain economic and business questions directly connected with current national politics.

This has not been done for partisan reasons, but rather for the purpose of clarifying the business issues involved in or affected by the dominant political and governmental policies of the present decade.

These policies, promulgated from Washington, have been nation-wide in their effects, reaching and conditioning the business operations of every reader of this publication.

On Tuesday, November 5, at the ballot box, each reader will have his opportunity to register his judgment for or against these policies as he sees them in relation to his business, national security and the general good. We can do no more than pray for intelligence and patriotism for the outcome.

TURNING now to something more local—closer home in its effects on the building business—we propose a subject that readers of this publication can influence more directly; namely, local taxes—real estate taxes, valuation methods and tax policies that in many places have stagnated home building and are developing blighted areas by driving home seekers out into the country to escape the annual raids of the tax assessor. These local taxes on homes, and the assessment practices back of them, are locally controllable; local building industry men can do something about them.

The real estate tax burden, pressed relentlessly on home owners by taxing authorities without regard for true property values, is forcing those owners and many new home seekers out of our cities into surrounding suburbs. Whether the blame lies on present officials or on existing laws, the net result is the same, according to a summary by the Federal Home Loan Bank Board, which declares:

“In either case, these taxes are discouraging new construction, often making it impossible within city limits; they are destroying the value of existing properties, and are speeding unwarranted decentralization.”

An example is cited of one northeastern city where the ratio of tax assessments to actual sales prices on houses is 150 per cent within the city limits and 106 per cent just outside its borders. Also an extreme case of unfair overassessment is cited of a single property in a New Jersey city, valued at $6,200 by the Board's HOLC appraisers, on which this agency sought vainly to get a reduction from an assessed valuation of $20,900.

The trend toward decentralization of some American cities is a natural one. But in others it literally is being forced by high tax rates, resulting in virtual condemnation of neighborhoods fully as attractive as many suburbs from a standpoint of living, and much closer to employment and established municipal facilities. This obviously is hurtful to the business future of these cities and to property values and the building industry.

The general problem, according to this Board study, is the tax burden which all city dwellers bear, as compared to suburban residents. Obviously, cities are going to be “abandoned,” and decentralization is going to be intensified, if there is no relief from such existing tax burdens.

In the entire metropolitan area of one city, which the Board surveyed, residential building permits amounting to $3,443,000 were issued in 1939, but only $803,000 of the total was within the city limits. Certainly one reason for at least 80 per cent of the new home owners going outside the city was the difference in taxes.

Readers of this publication are generally leaders in local business and civic affairs and can do much to correct these unfair and destructive real estate taxing policies where found to exist. Effort now to strengthen local home building and home ownership will make a worth while contribution to the nation's security.

SAMUEL O. DUNN,

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, AND DELBERT W. SMITH, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.
'INCOR' WINS OPENING RACE AT BELMONT

SPEEDS COLD-WEATHER ALTERATIONS
WITH MINIMUM PROTECTION . . .
FASTER CURING, BETTER CONCRETE

LATE last Fall, New York State legalized pari-mutuel betting. Belmont Park often called "the finest race-track in America," had to be streamlined in a hurry. By using 'Incor' 24-Hour Cement, extensive alterations were completed in dead of winter, under difficult job conditions. To illustrate:

Eighteen thousand sq. ft. of new 'Incor' concrete flooring was placed in the 3-tiered grandstand. Open to biting Long Island winds, with adequate protection next to impossible, concreting went ahead steadily, even at sub-freezing temperatures. Estabrook Construction Co., Hempstead, L. I., concrete contractor, maintained normal schedules straight through the winter, assuring on-time completion for season's opening.

Use 'Incor' for cold-weather work; cut form costs, save up to 60% on heat protection, push winter work ahead on normal schedules. Write for copy of "Cold Weather Concreting." Lone Star Cement Corporation, Room 2233, 342 Madison Avenue, New York.

Home Buyers and the Draft

REPORTS from many builders indicate that now and then a prospective home buyer is holding back because of fear that he will be drafted into the army and unable to meet his mortgage contract payments. Here's the answer to such a person:

The chances of being drafted for a married home owner with children are one in a thousand.

At present, of course, all married persons even though registered have a deferred status as to actual call to service. Not only are married men and married men with children to be exempt, but the remote possibility of their being called is made still less by the fact that men with responsible positions will be among the last to be called in the event of any emergency. Statistics show that the average home owner is usually in this "responsible" classification.

In order to further protect buyers of homes Congress has provided for protection against the foreclosure of a mortgage for nonpayment of principal or interest while an individual is serving in the U. S. Armed Forces.

FHA Continues Active

Further assurance for homebuilders with reference to the Draft also comes from the Federal Housing Administration. In an official news release dated Sept. 28 it was announced that men of military age may continue to buy, build or modernize homes under the FHA program, and lending institutions may continue to advance money for nonpayment of principal or interest while an individual is serving in the U. S. Armed Forces.

NOW is Still the "Time to Build"

Summing up the situation in regard to the effect of the draft on home ownership, it is safe to say that the odds are all in favor of home buying today. The direct effect of national defense expenditures, rearmament and the current upswing in business is to increase rents and raise prices. The individual who buys a home today anchors his housing cost at the most strategic time. There is nothing he can do that will have a more far-reaching effect on protecting his standard of living. Buying a home now at today's favorable prices and paying for it monthly "just like rent" is certainly the prudent course which builders can recommend to their friends and customers with full assurance.

Life insurance—Policies up to $5,000 will be kept in force by the Veterans Administration during the draftee's term of service. In return, the United States will hold liens against the policies until the draftee repays the Veterans Administration.

Taxes—When a draftee can prove his inability to pay taxes, no tax sales of his property can be held until after he has completed his service. In cases where the property is sold by local authorities for nonpayment of taxes, the draftee can reclaim it not less than six months after re-entering civil life.

Automobiles and tractors—Placed in a special category. Cars and tractors cannot be repossessed if the draftee has paid more than 50 per cent of total contract price.

In all cases, the draftees will be required to pay up accumulated debts after the termination of service.
To Avoid Housing Shortages

Cities and towns throughout America can help to meet the housing needs of the national defense program by pushing construction now under way and providing means to make the fullest possible use of existing housing facilities. Useful measures might include repair and modernization of older structures, registry of vacant rooms and houses and extension and improvement of transportation systems.

These are among the recommendations offered by the Committee on Housing of The Twentieth Century Fund in a special research report on defense housing. The report says, "It is important that current residential construction be encouraged and housing needs anticipated so that communities may face new conditions with as full inventories as possible. This is just as true of communities removed from defense activity as for those involved in it. All needed housing, wherever located, that can be produced now removes some of the strain in terms of demand for labor and materials which is almost certain to come later."

For cities and towns directly affected by armament activities the Committee sets forth the basic recommendation that these communities do their utmost to use the houses, neighborhoods and services they now have "before extensions of services and facilities are made or before new communities are established. Such a policy would insure the fullest possible use of existing resources in government, education, fire and police protection, streets, utilities, transportation systems and the like before going on to extensions or new construction."

In outlining specific policies for communities in areas of defense activity, the Committee urges four main steps:

a. The establishment of a registry service for vacant dwellings and for vacant rooms through the services of public and private local agencies.

b. Local campaigns, through the same media, to encourage householders to make vacant rooms available to the market.

c. Repair and conversion campaigns, utilizing the facilities of federal agencies, local lending institutions and municipal building departments in a coordinated endeavor.

d. Stimulation of the development of additional transit facilities to assure that full advantage may be taken of the widest possible commuting area.

The Fund's Housing Committee says that local agencies and local committees should be made use of in these steps, and points out that modifications of present laws may be necessary in some communities. The Committee recommends that state and local government agencies may promote efficient use of community resources by:

a. Revising zoning ordinances to make available, exclusively for housing, surplus lands now designated but not required, for commercial and industrial use.

b. Instituting means for quieting tax titles and for liberalizing the powers of municipalities to acquire, lease, or dispose of lands; and for reassembling parcels in dormant or abandoned subdivisions.

c. Developing land control regulations to facilitate the development of stable neighborhoods of low-cost dwellings.

In reading your article—"No Present Need Justifies Government Housing for Defense Workers," it occurred to me you might be interested in the situation as it affects Buffalo.

On Sept. 12th the "Buffalo Courier-Express" printed an article under bold headlines "Shortage Here of 5,000 Housing Units Hampers Plans for Defense." "United States Recognizes Need, Committee Tells, Aid Expected." The committee was composed of Building Trades Union and USHA officials.

The Niagara Frontier Builders Association in conjunction with other organizations immediately went into action, assembling data on vacancies, number of housing units built and under construction at present time, also a survey of units to be built during remainder of this year, probable number to be produced during 1941, also maximum capacity for production in 1941 if needed.

We find no shortage of housing at present and there are available at present time approximately 2,000 units, about one-third of which are substandard.

There have been produced from Jan. 1 to Sept. 1, 2,155 units; at present rate of building, 1,438 more units will be produced up to Jan. 1, 1941. A conservative estimate of units to be built during 1941, based upon present demand and production, is 4,600. This is about 50 per cent of maximum production capacity of Buffalo's residential builders.

More than 90 per cent of residential construction in this area is open shop. This accounts for the unions' running to Washington for more government funds to keep their union coffers filled. Also the Secretary of the Buffalo Municipal Housing Authority is Secretary and Treasurer of the Buffalo District Council of Carpenters, A.F.L.

There seems to be some hesitancy on the part of local FHA office to relax its stringent credit regulations in respect to borrowers whom it considers temporary employees engaged in defense industries. They are in large measure the people for whom we must produce extra housing.

We are experiencing considerable difficulty and delays in securing lumber due to large government purchases for defense program.

Prices are advancing and we are also interested in knowing what is the official policy of FHA in regard to appraisals and commitments as building costs advance. This is very important to builders and to the nation. FHA has changed the entire home financing system and today the industry is indirectly controlled by that agency of government, and unless complete cooperation is assured and given, housing may well become a bottleneck in defense.

R. C. DEWEY, President,
Niagara Frontier Builders Association.
MILLIONS of dollars are being spent for Army barracks, with everyone working overtime to rush them to completion. Construction activity at Fort Dix, N.J., above, and Fort Hancock, N.J., below, is shown. Contracts are handled on cost-plus-fixed-fee basis.

Building Industry Feels Effect of Vast National Defense Program

Defense housing, Army barracks, private homes and industrial construction all get full-speed-ahead signals. Normal construction markets helped.

WASHINGTON, D. C.—Some call it stupendous activity and others colossal confusion, but whatever it is that's taking place here in Washington, it is having a far-reaching effect on the entire building industry.

The significant feature of the rapid expansion of construction activity taking place is that private home building and private industrial and commercial building are increasing along with the vast government program.

To grasp what is happening to the building industry as a whole, let us consider four principal divisions of activity as follows:

1. Private residential building.
2. Army and Navy housing, such as barracks and cantonments.
3. Defense housing—housing for workers in defense industries and civilians connected with Army bases, airports and other government services.
4. Industrial and armament construction.

525,000 Homes this Year

Private residential building has shown vigorous advances the latter half of this year. Both building permits and contract awards have mounted higher each month. It is now estimated that the total number of nonfarm homes to be built in 1940 will reach 525,000 units—an 11 per cent increase over 1939.
FORTY THIRTY DAYS only elapsed between the photograph at left, taken June 13, and the completed structure at far right. The building is

The bulk of the improvement in residential construction is in small homes financed under FHA and savings and loan plans. The prospects are very definite that expanding industrial and defense production, with consequent jobs and increased income for workers, will continue to swell the building of private homes. Defense Coordinator C. F. Palmer, speaking recently before the Central Housing Committee at Washington, stated that private industry is expected to handle the bulk of the defense housing program.

Army Barracks Rushed

Most spectacular in the present building activity is the construction of Army cantonments and tent camps. The size of this work is indicated by the fact that early in the program orders for more than 650 million feet of lumber were placed, and the final totals will far exceed this. Construction is being handled by well qualified and experienced contractors operating under the cost-plus-fixed-fee plan, under great pressure for quick completion to house the new Army. Two types of housing are being provided by the Army:—cantonment type for troops stationed in the northern areas and permanent tent camps for southern areas. Of the 22 large troop housing projects for a division or more, now under way, 13 are of the permanent cantonment type and 9 of the tent camp type.

A typical permanent cantonment designed to accommodate one National Guard Division of approximately 19,000 officers and enlisted men costs approximately $8,000,000, of which $1,000,000 is for utilities. The following structures are involved in such a cantonment:

How to Qualify for Defense Construction


FOR ARMY CONSTRUCTION, write to Construction Division, office of the Quartermaster General, War Department, Washington, D. C.

<table>
<thead>
<tr>
<th>Item</th>
<th>No. Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barracks, Incl. Lavatories</td>
<td>316</td>
</tr>
<tr>
<td>Mess Halls (170 men each)</td>
<td>124</td>
</tr>
<tr>
<td>Storehouses (co.)</td>
<td>130</td>
</tr>
<tr>
<td>Day Rooms (co.)</td>
<td>130</td>
</tr>
<tr>
<td>Officers Quarters (individual)</td>
<td>4</td>
</tr>
<tr>
<td>Officers’ Quarters (barracks type)</td>
<td>24</td>
</tr>
<tr>
<td>Officers’ Messes</td>
<td>12</td>
</tr>
<tr>
<td>Administration Buildings</td>
<td>15</td>
</tr>
<tr>
<td>Fire Stations</td>
<td>3</td>
</tr>
<tr>
<td>Guard Houses</td>
<td>11</td>
</tr>
<tr>
<td>Post Office</td>
<td>1</td>
</tr>
<tr>
<td>Telephone Building and Equipment</td>
<td>1</td>
</tr>
<tr>
<td>Radio Building and Equipment</td>
<td>(where req’d)</td>
</tr>
<tr>
<td>Post Exchanges</td>
<td>12</td>
</tr>
<tr>
<td>Theaters (1,000 seating capacity)</td>
<td>2</td>
</tr>
<tr>
<td>Service Club</td>
<td>1</td>
</tr>
<tr>
<td>Recreation Bldgs. (1 per regiment)</td>
<td>9</td>
</tr>
<tr>
<td>Warehouses</td>
<td>16</td>
</tr>
<tr>
<td>Motor Repair Shop</td>
<td>17</td>
</tr>
<tr>
<td>Gas and Oil Stations (12,000 gals. ea.)</td>
<td>204,000 gals.</td>
</tr>
<tr>
<td>Utility Shop</td>
<td>1</td>
</tr>
<tr>
<td>Infirmary</td>
<td>9</td>
</tr>
<tr>
<td>Hospital</td>
<td>750 beds</td>
</tr>
<tr>
<td>Laundry</td>
<td>1</td>
</tr>
<tr>
<td>Bakery</td>
<td>1</td>
</tr>
<tr>
<td>Refrigeration Plant (mechanical)</td>
<td>1</td>
</tr>
<tr>
<td>Incinerator (10 ton)</td>
<td>1</td>
</tr>
<tr>
<td>Magazines (ammunition)</td>
<td>1</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Target Ranges</td>
<td></td>
</tr>
</tbody>
</table>

The cantonments are being built according to plans which were perfected some years ago and are of standard frame construction. Of the first estimated requirements for 650 million feet of lumber, some 38 per cent are for dimension and framing lumber, 15 per cent flooring and wainscoting, 10 per cent siding and 37 per cent sheathing. Some 21 species of lumber are being used. More than 75,000 doors and 200,000 windows are required.

Contractors are required to pay prevailing union wage scales, with time and a half for overtime, and since the work is being rushed, this means that a considerable number of the men are working 40 hours a week at the established union scale and 30 additional hours at overtime. (Continued to page 98)
EXCERPTS FROM ADDRESS OF C. F. PALMER, COORDINATOR OF DEFENSE HOUSING, NATIONAL DEFENSE ADVISORY COMMISSION, BEFORE CENTRAL HOUSING BOARD, OCTOBER 5

This program has five general categories: (1) Private Housing, (2) the RFC equity purchasing plan, (3) Federal Works Agency, (4) USHA, and (5) the Armed Forces.

1. PRIVATE HOUSING. In general, to private industry is assigned the major portion of demand which can pay commercial rents or corresponding purchase payments where the need is considered to be a permanent one. In most of the areas this "private" portion is being taken up at various rates by building and remodeling dwellings. FHA Mortgage Insurance and Savings and Loan Associations are very important factors in this field. We are establishing a current inventory to see how completely this market is being supplied.

Private capital is being encouraged to act by leaving to it the entire field of housing for sale. Governmental operations are now confined to rental projects. In most cases, the rent per month will be higher than the installment under the monthly purchase plan.

2. RFC EQUITY PURCHASE PLAN. The allocation of $10,000,000 to RFC Mortgage Company provides equity capital so that work on housing projects can be commenced immediately in areas where the need to house workers engaged in national defense activities is acute and is not otherwise being met.

These funds can be supplemented by $40,000,000 through the proceeds of mortgages on such projects insured by FHA under Section 207 of the National Housing Act, making a total of $50,000,000 immediately available. This plan is designed to produce houses more quickly than can otherwise be done, with subsequent resale of equities as rapidly as possible.

Land contracts and options have already been signed in some instances. Active negotiations are proceeding in 14 areas on both coasts at the present time where there is a reasonable likelihood that these rental developments can be absorbed permanently into the community patterns.

3. FEDERAL WORKS AGENCY. The third main category will take care of temporary need which none of the other measures are prepared to provide, and which requires direct construction by some Federal agency other than the Army or Navy. The Lanham Bill is aimed at this category of defense housing need, and places administrative responsibility in the Administrator of the FWA. Farm Security may come into play and make available its splendid experience and facilities where housing has future rural use. WPA will also be available for construction of utilities.

4. USHA-LOCAL AUTHORITIES. In the case of defense housing needed for families of low income, unable to pay commercial rents, and particularly for families of enlisted personnel and low-income industrial workers, where competent local housing authorities exist and where funds are available, it is proposed to make use of such local authorities and of the United States Housing Authority.

5. ARMY AND NAVY. In general, the best-defined needs for defense housing in connection with specific defense activities are those reported by the Navy and the Army.

It is understood that the Navy will itself build and manage most of its defense housing projects, with assistance from local housing authorities in some cases, and with recognition of the principles above outlined in all cases. The same is true of the Army, except that the Army will use Federal agencies for construction more extensively than the Navy.

Financing

Legislation and cash are needed for such a program. We now have both. The first Ten Million came from the President's emergency funds and went to the RFC Mortgage Company with which to buy equities. As a result, definite progress is already being made in 14 areas as previously explained.

Next $100,000,000 was secured through an amendment to the Defense Bill. Here is how $95,340,000 of that money is already being used.

Under way are a 12,640-dwelling unit program for the Navy, plus 700 units for Maritime Commission, and a 13,900-dwelling unit program for the Army. These will provide housing for low-income civilian and enlisted families connected with naval and military establishments. A large proportion of this need is "temporary" and none of it in the field either of private enterprise or RFC.

Thus, these three agencies, with various assistance from Federal and local agencies, are moving rapidly into the construction of 27,240 dwelling units of defense housing in 110 of the most urgent and critical situations; units which private enterprise could not produce because of the special or temporary nature.

In addition to the above we have the Lanham Bill, our most comprehensive piece of legislation. It meets the needs admirably and provides $150,000,000.

To sum up, after we repay the $10,000,000 which the President advanced to RFC Mortgage Company from his emergency fund, we have left $290,000,000 with which to do what? With which to attack the reported need of 128,791 units in 216 cities of 39 states and 8 possessions.

From facts before us we believe the need will run 160,000 to 200,000 units. If the latter, at say an average of $3,500, the total cost will be $700,000,000. We have $290,000,000. Consequently, it is self-evident how heavily we must lean on private enterprise.
How Builder O'Neill Has Averaged 300 Houses Yearly for 30 Years

Detroit Contractor Will Soon Build and Sell His Home No. 10,000; Volume Quality Building, Standard Plan, Forty-Foot Lots, Are Usual Practice

O

VER 250 homes were completed in 1939, another 250 or more are being built in 1940, by that aggressive Detroit contractor, Dennis O'Neill and his sons Norman and Robert, operating as Dennis O'Neill, Inc. After 30 years in the building business, contractor O'Neill is well on the way towards building his ten thousandth home (this is enough homes, by the way, to house a city of 40,000 people).

Some of the reasons for the O'Neill's success in building a good product at a low price—and marketing it in substantial volume—are apparent in examining their 1940 building operations.

We find their entire building activity concentrated in one section of Detroit; this simplifies supervision and cuts time of workmen in traveling from one job to another.

All O'Neill-built homes of today are of the five-room brick veneer type that sell for around $5400, lot included. The 1940 O'Neill project embraces five different types of houses, with identical floor plans but different exteriors. Obviously, this floor plan was first studied out with care, then developed through experience, and sales prove it finds ready acceptance among buyers. By offering five different front elevations, a range of choice is offered to prospects—a variety that is proving adequate to meet the varying tastes of prospects in the price class to which this builder is catering.

After an active building program during the boom days of the prosperous twenties, and a period of relative inactivity during the early thirties, the O'Neills began a new speculative building program in 1937 with the purchase of twenty lots in a row, and the erection of a group of Cape Cod homes. The project was completed in three months, and sold out almost immediately.

Following this, the O'Neills launched a succession of similar projects, buying solid streets or complete subdivisions, building on them groups of substantial homes for the moderate-price field, and selling them in most cases before the homes are completed—often before the steam shovel is out of the basement excavation.

O'Neill houses are modern through-
The popular O'Neill plan, with side elevation and section, presents details of this livable small home.

**Wall Section**

- **Shingles:** 12
- **2"x4" Studs**
- **2"x6" 16" O.C.**
- **Bracing at all corners**
- **Brick Sills**
- **Grades**
- **4" Conc. Fl.**
- **Cinders**

**Right Side Elevation**

**First Floor Plan**

- **Bed Room:** 9.3'x10.1'
- **Bed Room:** 11.0'x9.9'
- **Bath:** 6.0'x7.5'
- **HALL:**
- **KITCHEN:** 11.6'x11.0'
- **Living Room:** 11.6'x11.0'
- **Dining Room:** 9.4'x9.4'
- **PORCH:** 6.4'x9.4'
- **Ref. Range:**
- **Sink:**
- **Bath:**
- **Lin.:**
- **HALL:**

**Basement Plan**

- **Heater**
- **Unexcavated**
- **H Col**
- **Laundry Trap**
- **Up Stairs**
- **Down Stairs**
- **12.4'x11.6'**
- **10.7'x11.0'**
- **11.0'x5.4'**
- **6.0'x12.4'**
- **3.6'x8.0'**
- **6.0'x8.0'**
- **10.6'x11.0'**
- **5.4'x8.0'**

**American Builder, November 1940.**

*LEFT: Two further exterior variations of the O'Neill basic house achieved with bay, dormer, porch.*
WHEN I visited Radrock Estates at Fair Lawn, N. J., late this fall, the first things I saw were long rows of foundations already in, and the construction crew busily engaged in building more before freezing weather sets in.

“What’s the idea of getting so far ahead with your foundations,” I asked Bill Whyte, Jr., in charge of construction.

“We’re getting ready for old man winter,” he said. “We expect to keep our crew busy right through. That’s one of the big advantages of our shop-built panel method of construction.”

A Scientific Job

Radrock Estates is a 50-acre residential development where 200 homes will be built by the W. H. Whyte Construction Co. Some 65 houses have already been built and sold—all of them constructed of substantial 4’ x 8’ plywood panels built in Whyte’s own shop in Hackensack.

The W. H. Whyte Construction Co. is more than 50 years old, having been founded by the father of the present head of the company, W. L. Whyte. The firm has been noted for substantial quality work in high-priced residences and commercial structures, and it has brought an unusual background of experience to the small home field in its new Radrock Estates development.

The system of construction being used in Radrock Estates is the result of several years of thorough study and exhaustive tests, and is the particular “baby” of W. L. “Bill” Whyte, Jr., engineer in charge of construction, and H. D. Whyte, another son, who is in charge of design and shop work.

So the building method I am about to describe is not the crack-brain scheme of some crowd of theorists. It is the studied and thoroughly tested result of years of experience plus a knowledge of materials and methods.

When the Whytes decided to embark on the Radrock development they decided to make every use possible of the large and well equipped workshop they own in Hackensack adjacent to a lumber yard. In this workshop they set up a series of jigs or tables especially designed for the construction of 4’ x 8’ wall panels. They engaged an outstanding residential architect, R. C. Hunter of New York and Fair Lawn, N. J., to design a

SHOP BUILT
Panels to Outwit Winter

Whyte Constr. Co. of Fair Lawn, N. J., develops effective method to eliminate cold-weather delays. Has sold 65 houses in Radrock Estates; will build 40 this winter

By Joseph B. Mason

FAST electric power saw on the job handles miscellaneous cutting. The Whyte shop in Hackensack is completely equipped with woodworking equipment including saws, joiners and sanders.
WHYTE'S WORKSHOP where wall panels are built under controlled conditions. Angle irons on tables hold studding in place as plywood is "stretched" and nailed. Rolls of building paper and blanket-type insulation are convenient; at far right, putting on interior door trim.

WEATHERPROOF lapped joint where panels come together is shown above, as well as manner in which panel base fits over 2 x 4 plate. Joint detail shows how 1" x ½" corrugated metal fasteners are driven into wood across joint between plywood interior panels.

group of attractive small homes. They worked out on the drafting board the complete details of these houses and prepared shop drawings for them, using the standard plywood panels. After several years of experiment and trial they perfected the system and went ahead with the first 10 houses. The standard panel sections were built in a shop, complete with doors and windows installed and with exterior and interior trim applied. When the foundations were ready they were taken out to the site and a typical house was usually completely enclosed in one day.

In the past year some 65 houses have been built and sold, and the Whytes now believe they are ready
to go ahead in a big way. They expect to build 40 houses this winter. Once they have the foundations in, they can keep their regular crew at work all winter building the panels and a large part of the interior millwork and trim. Since the houses can be erected and enclosed in practically any weather they can ignore old man winter.

**How Panels Are Built**

Each wall panel consists of a stout framework of 2 x 4's, with 5/16" standard Douglas Fir Plyscord sheathing on the outer side and 3/4" Plywall plywood on the inside. Tightly fitted in the center of the panel is a layer of Kimsul blanket-type insulation. Layers of Sisalkraft building paper are placed under both plywood surfaces. The plywood is nailed to the studding with 6d finishing nails.

The result of this construction is a plywood section that is built like a truss and is more than four times as strong as ordinary diagonal sheathing construction. It is extremely tight and durable.

The plywood projects over the studding frame enough so that the panels overlap. The plywood of one panel is nailed upon the studding of the adjacent panel when erected. (See detail drawing.)

Construction of the panels as it takes place in the workshop as pictured is a highly scientific and carefully worked-out procedure. Steel angle irons screwed to the top of the work tables locate the placing of the studding automatically. The studding are cut to exact size, then set in place between the angle iron guides and securely nailed together. A layer of building paper is then pulled into place from a roll at the foot of a bench and the exterior plywood nailed in place. The panel is then turned over and the blanket insulation put in position. Another layer of building paper is then stretched over the frame and the interior layer of plywood applied. The plywood is literally stretched to eliminate any warp.
DRY-WALL construction is featured in the Radrock sign.

or bulk. It is nailed in the center first and then out towards the edges.

**Trim Applied in Shop**

Under the standardized procedure set up, the construction of panels in this fashion goes ahead very rapidly. An important feature is the construction of panels in which are located doors or windows. These are fully framed in the shop, the doors and windows installed and the interior and exterior trim applied. Doing this work under the controlled conditions of the workshop makes it possible to get an extraordinarily weather-tight, permanent job. The trim is then given a prime coat, and the panel is ready for delivery to the site.

In some cases a bay window, complete with decorative details on the outside and a built-in seat on the in-
side, is constructed. The “fussy” details of this sort of work can be done much better on the workbench than on the site.

By scheduling work carefully, the Whytes are able to keep their crews working steadily all the time. At times they may have panels for 5 or 6 houses piled in the shop. When the foundation is ready the panels are taken and delivered by their own truck, unloaded and immediately erected. Erection crew consists of 4 carpenters and 2 helpers. The panels slide into place and lock tightly, and are then securely nailed together.

In the interior finish the Whytes have perfected their work to a high degree. Because the panels are absolutely square they fit together tightly. Once in place there is no possibility of movement, settling or shrinkage—which are the principal causes of cracks. The interior surface plywood is given a Rezite treatment at the factory, which makes it moisture resistant. At the site the interior surface is then given a prime coat of lead and oil and the joints reinforced and carefully spackled. A final finish of wallpaper is then applied, except in certain rooms where paint is desired by the customer.

An important detail in the Whyte method of treating the joints is the use of 1" x \( \frac{1}{2} \)" corrugated metal fasteners which are driven into the wood across the joint every 18". These simple little fasteners are the type used in holding wooden box corners together. They are driven deep into the wood and covered with spackle and paint. (See detail.)

The test of the success of their system of treating joints is the fact that after more than a year in use there have been no signs of cracks appearing and no complaints by owners.

To observers in the building field who have seen many new methods of building homes come and go, the results achieved by the Whyte Construction Co. are very impressive. The firm has large real estate holdings adja-

(Continued to page 96)
FINE LINES and an unusual 24' x 32' floor plan feature this Highland Village home designed by Architect C. Storrs Barrows. Dining alcove adds to spaciousness of living room. Gas heater is in utility closet.

**Time and Money Savers Attract Rochester Buyers**

Cellarless houses feature 2" plank floors, automatic heat, fingertip hot water control, 4" insulation, dry wall construction.

The builders of Highland Village in Rochester have met with substantial success as the result of adopting many unusual, up-to-the-minute ideas in planning and equipping their houses.

They believe that low upkeep cost is of foremost importance to owners, and to achieve this end it pays to spend a little more on first cost in order to achieve substantial savings over many years. For example, the houses are insulated throughout with 4" mineral wool bats, and all doors and windows are tightly weather-stripped and equipped with storm sash and combination screen and storm doors with zip-in screens. Most of the houses have gas heat, and the result of the tight construction has been that fuel costs have run well under preliminary estimates of the gas company.

To insure low hot water heating costs the builders have installed the Savetime control of gas water heaters manufactured by the Savetime Sales Co. of Rochester. This device enables the housewife to turn on the gas heater by pushing a button in the kitchen or bathroom. An immediate supply of hot water is provided, and a red light glows while the gas is turned on. The bother of running up and down stairs to turn the gas heater on or off is eliminated, but at the same time the owner is assured of fuel economy because the gas is turned on only when hot water is needed.

Highland Village is the result of an unusually effective combination of a reliable builder and a gifted architect, operating under the name of The Brighton Group, Inc. The builder, Emil Muller, has had many years of experience in residential construction. The architect, C. Storrs Barrows, is experienced in residential projects covering the past 20 years, many of them showing unique and different types of construction. Lathrop D. Marsland, attorney, is president of the company. The selling is handled by Benj. K. Steele. Late this summer 22 houses were completed or under construction—all built to meet buyers’ individual requirements. (Continued to next page)
ALTHOUGH ONLY 28' x 24' in size, this nicely detailed Colonial has a remarkably spacious living-dining room arrangement and a fine kitchen-breakfast room plan. Gas heater is in exact center of house next to chimney. Emil Muller, builder.

A PUSH of the button in kitchen or bath turns on gas water heater, and red light glows while gas is on. Assures low fuel bills, eliminates running up and down stairs.

Among the usual construction features of Highland Village homes is the plank floor construction. The floors consist of 6 in. steel I beams on 4 ft. centers, over which is laid 2 in. planking. A finish floor of Bruce prefinished oak is laid over the planking. This system produces a substantial fire-resistant and crack-proof floor.

Houses are dry-built, using ¾ in. gypsum board with taped joints. As a result of the construction methods employed the houses have been free from normal shrinkage and cracking.

Most of the Highland Village homes are basementless. A ventilated and heated 2 ft. 6 in. air space is allowed. The bulk of the houses are heated with Janitrol and Bryant gas winter air conditioning units located in a closet or utility room near the center of the house. Ample and scientifically designed ducts assure a large air circulation, and cold air returns are taken off the floor for warmth.

Other products and equipment insuring quality construction in these moderate cost homes are Morgan trim and woodwork, overhead garage doors, Bennett recirculating fireplaces, zip-in...
screens, No. 1 fir framing, Bull-dog electric panel. Unique balances, weatherstripping.

The planning and layout of the development is carried out with great skill, with houses arranged in a variety of ways on the wide plots of ground. Architect Barrows has done a splendid job in making these houses architecturally attractive and easy to live in. As the floor plans of several houses illustrated with this article indicate, the usual size is only 24' x 32', and in one model the overall dimension is only 24' x 28'. Yet by the use of an "open plan" with the dining space opening off the living room Barrows has achieved a sense of supaciousness in these houses that is quite remarkable. He has made use of the most up-to-date planning techniques, which in some cases call for placing the kitchen, dining and service areas at the front of the house and the living room or bedrooms at the rear away from the street. All of the houses are executed in a charming Colonial style which has met with wide popular approval. In addition, both exterior and interior color schemes have been worked out in cheerful and interesting modern color schemes that do much to increase their appeal. Picket fences, old fashioned lanterns and Colonial architectural details carry out the atmosphere of the project.

24' x 32' Highland Park Home with "Easy-to-Live In" Features

FLOOR PLANS and elevations of this little house show that Architect C. Storrs Barrows has done everything possible to make life easy for the home owners. The compact kitchen has a sliding panel opening into the dining alcove. The living room has a spacious air for a 24' x 32' house. Bedrooms are at rear away from noise and traffic. Bathroom is "insulated" by stairways. There is space upstairs for an additional room or two. In addition to all this, the house has charming architectural appeal and a most attractive porch and window detail.
IDEAS for improvements, such as the one pictured here, and facts of cost and increased business will help to sell similar jobs.

BUILDING contractors and building materials dealers need not be sold on the idea that modernization of stores or other commercial buildings pays big dividends. They are already sold. However, they need ideas and facts which will help them sell modernization to owners of stores and other properties.

One of the most potent facts which can be used by the contractor or dealer is that the FHA modernization plan makes property modernization possible to a large body of individuals, firms and companies who would have a hard time collecting sizable down payments or meeting the bills for such improvements over a short period.

The reader is probably familiar with the FHA modernization plan. But it will not hurt to review it here, in view of the fact that building contractors and dealers are leaders in the National Modernization Campaign, now under way.

The first step for anyone going into modernization in any volume is to talk it over with his financial institution and make definite arrangements for prompt financing. Institutions qualified to make Title I modernization loans have all the facts and forms in their possession and can explain all necessary details. Some dealers carry a supply of application blanks and fill them out for the lending institution—doing most of the preliminary work. Others take the applicant to the institution and let the loan officer do the questioning.

But the main thing is to arrange for quick action either way, and to remember that the lending institution has final say, without consulting the FHA.

The more you know about the FHA plan, the more easily you can sell it to the prospective customer. For your convenience, here are some of the chief features concerning commercial properties (Class 1 and Class 2):

No loan for improvement of any one property can be for more than $2,500, although any number of loans—up to the limit of the borrower's credit—for amounts up to $2,500 can be made for improvement of as many separate properties.

The property must be owned by the borrower, or un-
Is Under Way

der lease to him for a period running at least six months longer than the term of the loan.

The maximum term is three years and 32 days.

The over-all charge (including FHA insurance of 34 of 1 per cent) cannot exceed the equivalent of $5 discount per $100 on a one-year monthly-payment note. The lending institution can make it as much lower than this maximum as it finds advisable.

Class 1 loans may be made for improvement of any type of existing property—repairs, remodeling, redecorating, modernizing or landscaping. They cannot be used to finance the cost of completing an unfinished structure, to purchase land, to pay for improvements undertaken before the loan was granted, nor to refinance existing uninsured obligations. They may, however, be used to repair buildings damaged by deterioration, fire, flood, tornado, or other calamity, provided a substantial portion of the original structure is left standing. Also they may be used to construct an attached building, or to change an existing structure from one type of building to another.

Class 2 loans are for building new structures not used for residential purposes. Incidentally, when they are for agricultural purposes, the term may be 10 years instead of 3 years and 32 days—or for 15 years if secured by a first mortgage.

Class 3 loans are for building homes, or at least buildings used wholly or partly as residences, and must be secured by first mortgages running for a maximum of 15 years. The maximum amount is $2,500 and the over-all charge cannot exceed the equivalent of $3.50 discount per $100 on a one-year, monthly-payment note, or 4 1/2 per cent interest plus 1 per cent service charge and 3/4 of one per cent FHA mortgage insurance.

There is one thing which those dealing with FHA modernization loans must watch—eligibility of all the items involved in the deal. In determining such eligibility there is one safe rule to go by:

Practically anything built into the structure so as to become a permanent part of the real property is eligible, while an item which is detachable or easily removable is ineligible.

Among the major improvements eligible for FHA-insured loans are:

- Repairs of all kinds, including carpentry, masonry, roofing, plastering, papering, electrical, heating, plumbing, etc.
- Remodeling of all kinds, including putting up or taking down partitions, building additions, making rooms out of attic or basement space, building porches or converting one type of building into another type.
- Redecorating floors, walls, ceilings, woodwork, etc.—but no detachable or removable furnishings.
- Modernizing the plumbing, heating or wiring systems—or installing entirely new systems; building in cabinets, shelves and other conveniences; installing septic tanks, cesspools, wells, pumping equipment, etc.
- Landscaping the grounds around the building, which may include grading, laying walks and drives, providing parking space, building fences, and planting. Landscaping or other improvement of vacant lots cannot be financed with Class 1 loans.
New Fireplaces Bring Increased Rentals

THE general attractiveness of a group of 26 small homes located on a well landscaped three-acre plot in Hollywood, Calif., can be judged by the two views at the left. Close inspection will show that new fireplace chimneys have been added to these houses, constituting a tremendous improvement in the individual units which cannot be fully appreciated on first glance.

Formerly these Hollywood Terrace homes had artificial fireplaces with gas grates for heat, as shown in the illustration at left below. It was decided that natural fireplaces which would be capable of delivering more heat would add both charm and utility. The buildings themselves, although erected some years ago, were well maintained and well worth the additional investment; the remodeling consisted of the following for each unit:
- Removing old fireplace mantel and gas equipment.
- Building brick chimney.
- Constructing wood and split brick fireplace mantel along Colonial lines.
- Installing Guardian drape brass screen, fire set, and-irons, grate and Superior Fireplace circulator.

This work was done at an average cost of slightly over $200 for each home.

Mrs. Helen Kirk, manager of Hollywood Terrace, is particularly appreciative of the added charm and greater livability afforded by the cozy comfort and efficiency of the open fireplaces with their heat circulating qualities. This remodeling has resulted in a marked improvement in securing new tenants at better rentals as well as retaining old tenants who appreciate the pleasing effect produced. As to rental, the management states that units ordinarily renting from $75 to $150 (unfurnished and furnished respectively) are now commanding an increased rental of 10 per cent.

E. A. Wickholm, fireplace contractor of Los Angeles, installed these Superior Fireplace heat circulators, and the remodeling was done under direction of A. D. Hoppe.

These units can be used for complete or supplementary heating purposes in all climates, and the experience related above will undoubtedly suggest similar possibilities in many other communities. They provide year-round supplemental heat and better ventilation by circulating warm air on the same principle as a hot air furnace. The cool air is taken into the heat circulator heating chamber through floor level intakes on each side of the fireplace and circulated out into the room through the warm air ornamental outlet grille over the fireplace.
New Display Ideas for Real Estate Office

INCE its completion, the office of the Puget Mill Company, Seattle, Wash., realtors, has attracted attention as an ideal type of arrangement for this branch of the building industry and provides a number of new ideas. Both the exterior, designed by McClelland & Jones, architects, and the interior, designed by Architect Henry Fey, are quite striking and provide maximum display. The front has a clever G-E zeon sign mounted directly on L-O-F cream colored Vitrolite facing over the two entrances and display cases.

White zeon lights are carried across at the entrance ceiling line. The bulkhead is faced with black Vitrolite, and there is a terrazzo floor. Small auxiliary display cases fill the end wall spaces; the plate glass is set in L-O-F almiulite mouldings. Window backgrounds are paneled in walnut. The interior has cleverly arranged continuous sawtooth display panels along both sides for various property and building exhibits. The lighting of these panels is done with an indirect fluorescent system. An oval receptionist desk occupies the front center position, back of which there are eight open booths for salesmen's desk space. At the rear, the executive offices are located on a glass enclosed balcony which overlooks the main floor.

J. H. Wilson Company was the building contractor.

LEFT: The walls of this Puget Mill Company Seattle office are arranged for improved real estate display.
Redmont Gardens in Birmingham Follow Latest Type Planning

One of the first garden type apartment house projects erected in the deep South is that of Redmont Gardens, a $1,250,000 development in Birmingham, Ala. The four buildings containing 200 apartment units are located in an exclusive section of the city on eight acres of land. Sixty per cent of the land is landscaped with gardens, lawns and walks.

This is of course not to be confused as a slum clearance or government housing project; it is a suburban-type, limited dividend rental housing project, financed by private capital, with insured first mortgage under Section 207 of the National Housing Act.

Architecture follows the Williamsburg Early American Colonial design, which harmonizes with the surrounding residential environs and is distinguished by gabled Colonial tiled roofs, Colonial entrances of simplicity and dignity, Colonial balustrades, etc.

Details of construction, illustrative of the quality of the development, include 9-inch brick walls furred, hollow-tile and concrete floors with Bruce hardwood block floors laid in mastic on the concrete, tile roofs (where slanting roofs are provided), slag flat roofs, weatherstripped windows and doors, copper full length screens, tiled baths with shower, and built-in radio aerials. Attics are insulated with glass wool.

Among the 200 apartment units of the one and two-bedroom type are to be found 11 different floor plans, offering one to suit most any taste. The rental price...
ranges from $45 to $72.50. One-bedroom apartments range in price from $45 to $56.25. Most apartments have foyers which add space and permit entrance to every room without going through any other room. Closets are numerous and large, no apartment having less than four, many having five commodious closets with ample shelving. All baths are accessible from the living room without passing through a bedroom.

Appointments of the apartments are in character with the construction and design. Each apartment has an electric range, an electric refrigerator, Venetian blinds, radio aerial and radio ground installed, storage space in the basement and access in the basement to laundry rooms which are equipped with double-tubs and metered washing machines and driers for use of tenants.

For best results in showing, several apartments in the project were furnished by a local store. Being attractive, these units usually rented first, and in a few cases the furniture was bought by the tenant.

Particular attention was given to the landscaping of the area. Trees were saved where possible and top soil removed from the building areas for use elsewhere on the plot. Some 3,000 pieces of shrubbery, also additional trees, were planted. Play equipment was provided, including swings and sand boxes.

Streets in the development are amply wide with recessed portions for angle parking. In addition, a number of brick garages with metal partitions and Overhead doors were built in the rear with paved approaches.

Steam heating is provided by means of two coal-stoker-fired steel boilers, each one serving two buildings. Hot water is served by the same means. The heating is thoroughly automatic, being controlled by the outside temperature. All hot and cold water pipes are either copper or galvanized wrought iron. The heating system is of the two-pipe vapor low-pressure type.

Redmont Gardens were built and are owned by B. L. Jackson, Inc., of Washington, D.C., being financed by a loan from New York Life Insurance Company.
WHEN your American Builder reporter passed through Matt. P. Will's Glenburnie home community in Richmond, Va., he found much to praise. For here was a builder who was not only building substantially and well, but was making every effort to retain the natural beauty of the surroundings and to erect houses that carried on the fine old tradition of the Colonial architecture of the section.

The two houses illustrated above were designed for

Matt. P. Will of Richmond, Va.,
Gives Buyers High Quality in
Authoritative Brick Homes.

SIX SPACIOUS ROOMS and two baths are included in this well laid out 32'4" x 22'9" plan. Note closet and window seat details.
TYPICAL VIRGINIA STYLE of Colonial times is beautifully carried out in this Glenburnie home, built by Matt. P. Will. Andrew Kidwell, architect.

Mr. Will by Architect Andrew L. Kidwell and are of substantial brick construction, with slate roofs, copper flashing, concrete porches and well-thought-out floor plans. Matt. P. Will has had long experience in the building business in Richmond and has used that experience to good effect in planning and constructing houses that meet the requirements of the people in his area.

In the house at left the traditional square Virginia brick house has been enlivened by the wrought-iron front entrance detail and by the unusually attractive porch railing and trim. There are six well-proportioned rooms and two baths in the 32' 4" x 22' 9" house.

One of the finest recent examples of the work of Will and Kidwell is the long, narrow, traditional Virginia Colonial home above. This has a spacious center hall with a fine Colonial stairway. The two baths upstairs are conveniently located as well as being economically placed back to back.

LONG AND NARROW in traditional Virginia center-hall style is this 36' x 21' plan. The two baths are economically grouped.
Oregon Lumberman Builds His Own Home

CONTRACTORS have learned to expect something special when a lumberman builds a home. The builder of the W. W. McCready residence in Forest Grove, Oregon, was not disappointed. Mr. McCready is associated with the W. J. McCready Lumber Company, operator of a large string of lumber yards in the northwest. C. H. Freeman of Portland was the architect.

A noteworthy feature is the double-barreled insulation job, both on interior and exterior walls. Exterior side walls and pitched roof areas were covered with asphalt-coated Fir-Tex sheathing. On the interior, plaster on walls and ceilings was applied on Fir-Tex plaster base insulating lath.

For flooring, Mr. McCready brought in white pecan from the south. Siding is 1 x 10 vertical grain hemlock tongue and groove. Philippine mahogany trim is used in the living rooms. One-half inch butt vertical grain cedar shingles are used over roof sheathing laid as shown below. The surface is sealed and painted with aluminum paint. Approximately a ton of steel was used in reinforcing of the construction of the house.

Other material and equipment used are Trane air conditioning, Pabco paint and General Electric refrigerator.
THE floor plans of this Oregon home reveal that there is much more well arranged floor area in it than a casual glance at the exterior, opposite, would indicate. There is a two-car garage, recreation, storage and laundry space in basement, 6 rooms, 1½ baths on first floor, and 3 bedrooms, bath on second.

THE McCready home was sealed inside and out with insulation board for sheathing and plaster base, the latter applied as shown in the above view. The home has an air conditioning system.

BASEMENT game room above has tinted Fir-Tex walls.

INSULATION plank as interesting attic bedroom walls.
$265 SAWED Off House Cost

How Bill Strother of Mattawan, N. J., uses power equipment on houses, bars, millwork. Has "all the work he can handle"

MANUFACTURERS of power equipment have been reporting sharp increases in the sales of their new and improved products to builders, indicating that increased building volume is having a definite effect on building methods.

The effect of rising labor costs and demand for speed in construction is to increase the use of new and improved electric saws and other power equipment. An outstanding illustration of this is William M. Strother, carpenter and general contractor of Mattawan, N. J. When interviewed by American Builder recently, the fact came out that his problem was one of production at a lower cost rather than sales, for he had all the work he could handle for the balance of the year.

Strother maintains a well-equipped shop, with power equipment that does a great deal to enable him to produce a better house faster and at a lower cost. One of the recent items of equipment installed by him was a Walker-Turner radial saw. This piece of modern builder's equipment is equally adaptable for use in the shop or out on the job, and Strother makes use of it in both places. The point of this story is the construction of an attractive $15,000 house, illustrated on the opposite page. On this job Strother set up his radial saw right at the site and did all the cutting involved. He also used an electric hand saw for incidental cutting. Strother's actual report on this job is as follows:

"In keeping a record, we find the following:
ATTRACTIVE New Jersey home built by Strother, on which cost records showed saving of $265 by using one radial saw and one electric handsaw.

House estimated at $15,000.00
Carpenter labor at $1,500.00

"Girder lines very much broken with total of 10 independent girder frames set flush, with all beams squared and notched. All bridging, framing, studs, 2nd floor beams, roof rafters and gables were cut with 1 mechanic and 2 helpers, the foreman making the layout, and the only other power tool was a small portable Skilsaw for sheathing cuts.

"There were 15,000 ft. of framing material used, and estimated time was:
5 days, 5 carpenters, @ $8 per day $200.00
Carpenter helpers, 6 days @ $4 per day 120.00

$320.00

"Our actual time spent was 2 days for 1 man cutting, 2 helpers, layout by foreman part time:
Carpenter on saw $16.00
Helper 16.00
Foreman 17.00

$49.00

Estimate $320.00
Actual 49.00

$271.00

Power bill for equipment operation 6.47

$264.53

(Continued to page 94)
Another of a series, intended as suggestions to the builder and architect as possible ways of using Douglas Fir Plywood for the finish of a high ceilinged room and balcony.

On these pages is illustrated a rustic or camp type of treatment for a high ceilinged room with a balcony at one end. The walls are covered with Douglas fir plywood in random sizes, with flush joints. A wide facia board replaces the conventional cornice. Various types of band-sawed treatment for the balcony railing are shown. Five-eighth inch Douglas fir plywood is shown for the floor of the balcony, with joints covered with wide flat battens. Walls and ceilings of this room would be effectively treated with oil stain, to which a small amount of pigment might be added for a slightly clouded effect.

**MATERIALS:** Walls and ceiling panels are of \( \frac{1}{4} \)" wallboard grade of Douglas fir plywood, secured with 4d finishing or casing nails. Nailing strips may be let in to the face of studs at proper intervals or the frame may be covered with 5/16" sheathing grade of plywood as a solid base for the paneling. In this case, by applying the sheathing with 6d nails 6" on centers at edges and 12" elsewhere, it would furnish all necessary bracing.
RANDOM PANELLING

ELEVATION OF BALCONY  SCALE  1/4" = 1'-0"  

CONTINUE SAWED PLYWOOD RAIL

FLOOR, SCALE  1/4" = 1'-0"

SUGGESTED TREATMENT FOR BALCONY  SCALE  1/4" = 1'-0"
SHOPCRAFTER'S Corner
Things To Build for Profit or Pleasure

Stepped Window Ledge and Terrace in Brick

THE extended window ledge idea, as shown at the right, and detailed below, comes from California: flower pots and substantial base add charm and dignity.

FROM California come these two clever ideas which add much to a frame cottage of this type by lending a substantial feeling, and at the same time introducing a colorful point of interest. The adaptability of such treatments is wide because they can be applied to dressing up existing homes as well as being included among features of new construction.

The details indicate the simplicity of construction. A good base will assure against settling; in colder climates, footings to frost line for the flower ledge will prevent heaving. The siding treatments and other details will suggest possibilities for modernization jobs, bringing them up to date.—Hi Sibley.

THE stepped terrace above enclosing under-window hedge provides a novel and decorative approach.
Ten years ago construction features were the main arguments used in selling new houses. Mr. America knew good construction (or thought he did) and a well-built house was all he asked.

Today Mrs. America has to be sold, too, and she's far more interested in operating equipment than she used to be. G-E Kitchens, G-E Wiring Systems, and G-E Heating Plants are the sales clinchers with her. That's why Builders and Architects everywhere have found G-E's proved house merchandising plan profitable to them. Why not send in the coupon and see how this plan can work for you? Briefly it consists of:

1. A Tested House Merchandising Plan—An aid in selling which builders everywhere are using successfully.

2. An Architectural Engineering Service—The G-E Home Bureau does not furnish plans, but its staff of experts will check yours and make suggestions — wiring, heating, air conditioning, lighting, kitchens, and laundries.

3. An Advertising Service—Tested advertising campaigns, layouts, and copy adaptable to your use.

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City  State  County
WHAT'S NEW IN BUILDING MATERIALS

AB217 A new extra heavy three tab strip shingle, the "Magmatab," is offered by Barber Asphalt Corp., Barber, N.J. It is constructed with a heavier butt which not only gives extra protection, but also provides an attractive shadow design on the finished roof. The extra thick coatings of asphalt and colorful mineral granules on the tabs tend to give a tapering appearance to each shingle.

AB218 Enhanced appearance and increased weather and fire resistance are the announced objectives of recent developments in the Ruberoid Co. (New York City) line of square tab asphalt shingles known as "Thick Butts." The exposed part of the shingle has two additional layers of the coating which seals in the asphalt saturant, and also two layers of the mineral surfacing. The result of this extra thickness of the butts, the manufacturers say, is both increased protection where it is most needed and improved appearance due to the deeper shadow lines. The extra mineral coating substantially increases fire resistance. The shingles have an interesting wood-grain texture and are obtainable in a number of soft colorings.

AB219 Farley & Loetscher Mfg. Co., Dubuque, Ia., has recently placed on the market a new garage door called "Uni-Rol." It is extremely well balanced, and easily adjusted so that the operations of opening require merely a slight push on the bottom to swing it automatically to a full open position without any further effort. The counter-balancing springs are so easily accessible that any adjustment can be made very quickly. The door is constructed of heavier parts than most doors in the lower priced field.

AB220 Sanitas Fabric Wall Covering, developed by Standard Coated Products Corp., New York City, won its national consumer reputation for washability and wearability in a million kitchens and bathrooms. But this year, this long established favorite steps out in style. Now there are appropriate Sanitas designs and colorings for all rooms. Sanitas is available in 16 decorator-styled plain colors—simulating the appearance of the perfect paint job. Sanitas plain colors are 4 coats of paint, machine-applied on a fabric foundation.

AB221 Extruded aluminum alloy metal trim is most beautifully presented in the 1940 catalog (No. 104) of the Wilson Metal Products Co., Columbus, O. This is a brochure of 24 pages smartly illustrated in aluminum, solid colors and black. Nosings with linenoleum inserts for counters, tables, sink drainboards and wainscot caps—the latest thing in smart decoration—are included.

AB222 A "Maintenance Painting Handbook" has been compiled by American Marietta Co., 43 E. Ohio St., Chicago. It presents the findings of more than 20,000 actual analyses of painting problems and is a pocket size handbook of 120 pages. How to paint special surfaces such as brick, concrete, metals, felt, paper, linenoleum, glass and slate is explained.

AB223 "Preservation with No-D-K Natural Wood Creosote" is an illustrated brochure of 16 pages and covers prepared by the Tennessee Eastman Corp., Kingsport, Tenn. It discusses termite control and lumber treatment to prevent decay.

AB224 "A Glimpse of an Interesting Modern Home" in which floors of maple make a special contribution to unique interior effect, is the title of a striking 8 page folder prepared by the Maple Flooring Manufacturers Assn., McCormick Bldg., Chicago. Large photographs illustrate numerous interiors in this modern home and directions are included as to how to lay and how to finish maple floors.

AB225 The new Shelby catalog, No. 38, from The Shelby Spring Hinge Co., Shelby, O., is a spirally bound portfolio of some 200 pages. The complete Shelby line is illustrated and numerous architectural details are included showing recommended construction methods.

AB226 "Tip Top Float Over" garage door equipment featuring the new No. 760 line is offered in a neat folder from Western Products, Inc., New Castle, Ind. This hardware is adaptable for modernizing old doors as well as when building new.

AB227 "Modex, The Modern Casein Paint in Concentrated Powder Form" is the subject of a new 4 page data sheet from The Reardon Co., St. Louis. It shows the advantages of Modex for walls and for ceilings and specifies the proper method of application.
THE BEST ALL-'ROUND
TRUCK VALUES
MONEY CAN BUY!

Join the big family of International owners next time you buy trucks—and enjoy the performance and economy these units will give you over a long period of years.

There's real satisfaction hauling your loads with Internationals. That's because this organization knows how to build trucks for the men with loads to haul—trucks that are all-truck all the way through, readily adapted to all types of loads and conditions.

Depend on Internationals for outstanding service at lowest possible cost. Find out all about the types and sizes best suited for your work. The nearby International Dealer or Company Branch will give you complete information. Sizes from Half-Ton units up to powerful Six-Wheelers.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago, Illinois

S. W. Bomberger, mason and plastering contractor, Naperville, Ill., finds this International Half-Ton Truck with pickup body a handy unit in his work.

INTERNATIONAL TRUCKS
EQUIPMENT ITEMS FOR MODERN BUILDINGS

AB228 Moulded in one seamless piece from vulcanized hard rubber, the new "Stasco" Ebonite seat of the Standard Tank and Seat Co., Camden, N.J., cannot be worn out, despite the usual rough treatment that public toilet seats get. There is no "separate surface" to wear off. It is solid hard rubber throughout. This new Ebonite seat is also made in closed front pattern with or without cover.

AB229 As the result of many years of specializing in home-ventilating, the "Range-Ventor" is offered by the Universal Blower Co., Birmingham, Mich. Objectionable heat and odors from cooking rise up under the hood, where a built-in electric fan quickly forces them outside.

AB230 Incinerators are needed in present-day homes more than ever before. Automatic heat makes impossible the burning of trash in the house heater. The Ready Built Kernerator, developed by the Kerner Incinerator Co., Milwaukee, illustrated here, is a compact, self-contained unit which is installed in the basement wall when the building is being erected and is usually connected to a flue which serves other equipment.

AB231 A new, yet well proven development in hot water tanks is offered by Porcelain Steels, Inc., Cleveland, the "Porcel-Clad" hot water tanks that are porcelain enameled both inside as well as outside. A twenty-year guarantee covers these tanks. They have an instant appeal to home owners, for they protect from tank corrosion or "rusting."

AB232 "Build a Beautiful Home With Beautiful Windows" is the title of a new 24 page brochure or sales manual on Coco steel casement windows issued by the Coco Steel Products Corp., 1143 N. 11th St., Omaha, Neb. Presenting 20 large photographs this booklet pictures many beautiful window treatments with both exterior and interior views.

AB233 "It's Fun to Live, Electrically," is the intriguing title of a 24 page brochure by the General Electric Co., Home Bureau, Bridgeport, Conn. Kitchen planning for efficiency, style and attractiveness is discussed, diagrammed and illustrated. General Electric kitchen and basement equipment is also illustrated.

AB234 Adequate wiring and sufficient outlets for the modern home are stressed in a very interesting way, in a 24 page booklet by Pass & Seymour, Inc., Syracuse, N.Y., entitled "Are You Sure Your Plans are Complete?" Every room of the house is illustrated with emphasis placed on desirable electric outlets and conveniences.

AB235 "Thermador" electric heaters, developed by the Thermador Electrical Mfg. Co., Los Angeles, are presented in a new 4 page price list specification data sheet. These heaters include large built-in wall type heaters with electric fan for distributing the heat, also, long radiant bathroom heaters "Head-to-Heels," smaller radiant and convection type bathroom heaters.

AB236 The "Aerofuse Outlet," a flush type ceiling diffuser for fresh air, either hot or cold, has been developed by Tuttle & Bailey, Inc., New Britain, Conn., and illustrated and described in a new 8 page data sheet (Catalog No. 40). The Aerofuse Outlet is a circular grille in sizes ranging from 4½ to 54 inches.

AB237 Griffin surface hinges, a popular cost-cutting item by the Griffin Mfg. Co., Erie, Pa., are illustrated and described in a new 6 page folder.

AB238 Shepard home lifts for passenger elevators are presented attractively in a little 16 page folder "What Users Say about the Shepard Home Lift," compiled by The Shepard Elevator Co., Cincinnati, O.

AB239 Outdoor fireplaces and how to build them are very completely and attractively presented in a new portfolio by the Hancock Iron Works, 52 West Pike St., Pontiac, Mich. Five popular designs for stone and brick outdoor or fireplaces are included and a special section tells all about the Hancock outdoor fireplace equipment, including barbecue spits, grill.

AB240 Kimball elevators, the product of Kimball Bros. Co., Council Bluffs, Ia., are presented in a series of 4 page data sheets—one featuring the Kimball straight-line-drive elevator machines, another the Kimball light electric.
"ONE OF OUR BEST ‘SALESemen’ IS ASBESTOS"

Say leading American Builders

ONE OF THE LATEST additions to the J-M line is this new Cedar-grain American Method Shingle (No. 607). Its greater length and simple nailing method make installation fast and easy. Its interesting grained texture adds beauty and distinction to any house. And roofs of this attractive new fireproof shingle cost but little more than a good-grade wood-shingle roof.

TYPICAL of one of Philadelphia’s most successful developments is this attractive home. The builder, John H. McClatchy, uses No. 35 J-M Asbestos Shingles on the roofs, J-M Asbestos Clapboards combined with stone on the sidewalls . . . finds they offer selling advantages that appeal to every prospect.

LOW-COST houses in the widely talked about promotion of Framingham Homes, Inc., near Boston feature J-M No. 607 Asbestos Roof Shingles and J-M Asbestos Clapboards. They add little if any to the price of the houses; they add fire-protection and low upkeep cost to their selling features.

The fire-safety and lasting beauty of Johns-Manville Asbestos Shingles for roofs and sidewalls . . . plus the fact that they need little if any maintenance . . . give you selling arguments few buyers can resist.

WHEN you build with J-M Asbestos Shingles you provide unquestionable proof that your houses are built for beauty, permanence and fire-safety. Their texture has all the attractiveness of weathered wood. As for durability, they cannot rot or decay. They won’t burn, and you can apply a blowtorch to J-M Shingles to prove it! And because they never need paint to preserve them, J-M Asbestos Shingles give you a selling point on low maintenance that alone is sure to sell prospects for you.

For Modernizing, Too

Johns-Manville Asbestos Shingles and Clapboards are easily and quickly applied on new work or old. Give new beauty, new fire protection, save money on upkeep. Easy to sell, surprisingly low in cost. J-M Time Payments make it easy for any owner to buy.

Check the low cost of using J-M Asbestos Shingles on roofs and sidewalls. There’s a type and style for homes in every price class. Backed by the name Johns-Manville—the name that every home owner recognizes as a symbol of quality—they help you do better building or modernizing work . . . sell jobs faster. For complete details, just write Johns-Manville, 22 East 40th Street, New York, N. Y.

SILENT SALESMAN

This good-looking plaque, furnished free, identifies J-M products in your houses. Ask to see one.
SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers.
Please use the coupon on page 72 for requesting further product
information or new catalogs. Mail coupon to American Builder Reader Service,
105 W. Adams St., Chicago; or write direct to these manufacturers men-
tioning your profession, occupation or connection with building industry.

NEW MODELS, POWER EQUIPMENT & TOOLS

AB241 Due to the successful record
of the air cooled engine,
whose use the Jaeger Machine Co., Colum-
bus, O., pioneered on thousands of con-
tractors' pumps, this type of power has en-
joyed growing popularity on concrete mix-
tors' pumps, this type of power has en-

AB243 Fred W. Wappat, 7323
Penn Ave., Pittsburgh, has
announced a number of improvements in
Model A-9" electric hand saw, now on the
market. The new Model A-9" is more

AG242 A new ½ inch drill, Model
80, is announced by Skil-
saw, Inc., 5031 Elston Ave., Chicago. It is
compact and light in weight, weighs only 8

AG244 The Construction Machin-
ery Co., Waterloo, Ia., has
expanded its dual prime pump line with the
addition of combination wet vacuum and
dual prime units especially adapted for well
point pre-drainage systems. These "Triple
Prime" pumps are made in 4", 6", 8" and
10" sizes. Features of these pump units are
their better adaptation to well point pumping
than the conventional centrifugal pump.

AG244 CMC Wall Point Pre-Drainage Pump.

AG245 The Black & Decker Mfg.
Co., Towson, Md., has
brought out an exceptionally valuable piece
of literature, their "Portable Electric Saw
Handbook." This is an illustrated book of
24 pages and covers and, besides telling all
about the construction of the Black &
Decker electric hand saw, it illustrates
many out-on-the-job uses that are both
time and labor saving. A special section of
great value discusses how to get electric
power on to the job. This section on
"Power Sources" will be studied with profit
by all contractors and builders.

AG246 Power excavating with
Blaw-Knox two-line lever
arm buckets is covered in a comprehensive
36 page catalog by the Blaw-Knox Co.,
Pittsburgh. This is really a text book on
power excavating covering sizes and types
within a wide range.

AG247 Mack's trucks for building
contractors and building
material dealers are presented in four new
brochures each devoted to 1941 model Mack
trucks of different sizes. Light trucks, me-
dium trucks, heavy hauling trucks and
truck tractors are the classes covered—
Mack Trucks, Inc., New York City.

AG248 "The Electric Carpenter"
power woodworking ma-
chine, a rugged, versatile outfit, offered by
the Messinger Mfg. Co., Tatamy, Pa., is
illustrated and described in the new 6 page
folder.

AG249 A fast printing machine for
producing whiteprints is the
Ozalid Model F, developed by the Ozalid
Corp., Johnson City, N.Y. A new 8 page
broadsider shows all about this machine and
what it will do.

AG250 Reid-Way floor sanders of-
fering "3 exclusive fea-
tures" are presented in a new 4 page data
data sheet which also describes the Reid-Way
system of floor finishing which guarantees
profits and increased business to Reid-Way
users—Reid-Way Corp., Cedar Rapids, Ia.

AG251 "Rafters Cut Without
Marking—all framing cuts
for home made in less than a day's time!"
That is the story told in a new leaflet by
J. D. Wallace & Co., 134 S. California
Ave., Chicago, telling of the use of the No.
4660 Angulator on the Wallace No. 1 rad-
tial saw. With this device it is not neces-
sary to mark the rafters before sawing.

AG252 The Guild portable sander,
developed by the Syracuse
Guild Tool Co., Syracuse, N.Y., is illus-
trated and described in a new folder.

AG253 Babcock sprung ladders,
24 pages and covers and, besides telling all
retail lumber dealers, are cataloged in a
new 36 page vestpocket handbook of inter-
est to all ladder users. Some novel ideas
for ladder staging, extension ladders and
trouble ladders are included—W. W. Bab-
cock Co., Bath, N.Y.

American Builder, November 1940.
"I SPENT $390 LAST YEAR FOR ADJUSTMENTS ON WINDOWS, DOORS, ETC."
SAYS A PROMINENT OHIO BUILDER

No Money Spent For Adjustments On This House . . . . Every piece of wood in it was treated with WOODLIFE

It costs just a few cents to treat a window with WOODLIFE—not much more for treating a door. You get protection for years to come—against swelling, shrinking, warping, checking and grain raising as well as decay and stains.

The home owner gladly pays for this protection—all it costs him is $12.50 extra to have all doors and windows WOODLIFE-treated in the average $8,000 house.

You can treat millwork in your own easily constructed tank, make a profit on the treatment itself, and save hundreds of dollars on service complaints. Send today for complete information and WOODLIFE-treated samples.

Protection Products Mfg. Co.
Mfrs. of PRESERVATIVE SOLUTIONS for 19 Years
Research Laboratory and Plant KALAMAZOO, MICH.
EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

HEATING & AIR CONDITIONING PROGRESS

AB255 McDonnell & Miller, Wrigley Bldg., Chicago, offer a new “snap action” valve for humidifier pans designed to eliminate valve sticking or clogging from lime, scale or mud in the pan. A cam-and-roller action causes it to snap from tight closure to wide open whenever the water level drops a quarter of an inch. There is no slight cracking or seeping action. When the water level rises to the proper level the valve snaps to the closed position.

AB256 Illustrated is one of several models of “Motorstokor,” the automatic burner for anthracite fuel in the buckwheat or rice sizes, offered by Motorstokor Division, Hershey Machine & Foundry Co., Manheim, Pa. It feeds directly from bin to fire and automatically removes ashes to sealed containers, eliminating all shoveling and making for clean and dustless operation. This unit replaces the grate and may be installed in any standard coal burning furnace or boiler, is equipped with a set of Minneapolis-Honeywell thermostatic controls for full automatic heat and is available in a wide range of sizes for new homes or old.

AB257 A “gas saver” for small homes, is the description applied to a new model in the line of “Supersex” air conditioning furnaces announced by Perfection Stove Co., Cleveland. Featured as supplying 24-hour air conditioning, it operates on the 3-stage principle. It is also a space saver, for it occupies only approximately four square feet of floor space (24 1/2 x 24 1/2 inches). "In most small homes this 3-stage system calls into use the second stage which is a low, or coasting fire, during most of the time, and in milder weather alternates between coasting and pilot stages, with combustion being continuous blower operation, thus avoiding stratification," the announcement says.

AB258 A new product of an old established concern is the Durabilt stoker recently introduced by the Durabilt Steel Locker Co., Aurora, Ill. This new quality coal stoker for homes is illustrated and described in an attractive 3-color data sheet of 4 pages.

AB259 Two thoroughly up to date units of one of the oldest heating equipment manufacturers, The H. B. Smith Co., Inc., Westfield, Mass., are the Smith No. 160 series home heating units for oil, gas or stoker firing and the Smith Mills No. 15 boiler for small homes. Each of these new lines of heating equipment is attractively presented in a new 4 page data sheet.

AB260 The Combustioneer Div., The Steel Products Engineering Co., Springfield, O., has prepared a striking 12 page portfolio analyzing coal stoker performance and relating the actual experience of numerous home owners and builders with Combustioneer stokers. “Meet Your Neighbors” is the title of this interesting document.

AB261 Reynolds streamline prefabricated air cond. heating and cooling is presented in a new 12 page data sheet from the Richmond Radiator Co., Inc., Uniontown, Pa. Prefabricated ducts and fittings including elbows, transitions, stackheads and outlets often cost less and usually produce a better job.

AB262 Payne modern console heaters (gas burning) are illustrated and described in a new 4 page data sheet from Payne Furnace & Supply Co., Inc., Beverly Hills, Cal.

AB263 Bertossa air conditioning units, presenting products of Jackson & Church Co., Saginaw, Mich., are covered in a series of new 4 page data sheets. Included are the Bertossa gas-fired air conditioning units for homes, similar equipment oil-fired, a large oil-fired power unit and a low priced gravity unit for homes, either oil or gas-fired.

AB264 “York Heat” which is said to embody the most complete line of oil burner equipment in the world is briefly presented in a new 4 page data sheet by the York Oil Burner Co., Inc., York, Pa.

AB265 The Koven waterfilm boiler has been developed for the one family house for automatic firing with oil, gas or stoker coal. A new 4 page data sheet from Koven Waterfilm Boilers, Inc., Jersey City, N.J., gives details of the welded steel flash boiler.

AB266 A redesigned and restyled Rudy oil heat air conditioner of the Rudy Furnace Co., Dowagiac, Mich., is attractively presented in a new 8 page data sheet which gives complete details of the heater and suggests how it should be installed in the modern homes.
How to Lay Linoleum for Most Satisfactory Service

In answer to queries from builders and contractors as to the types of subfloors over which linoleum can successfully be installed, several approved methods are presented on this page.

A double wood subfloor provides one of the best surfaces for linoleum installation. Although a large amount of linoleum is laid over a single wood subfloor, it is not recommended generally because the floor boards may show through. Lining felt is desirable but not mandatory for monolithic subfloors (concrete, terrazzo, etc.), but it is essential and required in one manufacturer's specifications (Armstrong) for laying linoleum over wood subfloors.

The most satisfactory type of wood subfloor for linoleum is a bottom layer of %-inch kiln-dried tongue-and-groove boards, not over 8 inches wide, face nailed at each end and at every bearing with two eight-penny nails. This should be covered with building paper and 25/32-inch kiln-dried tongue-and-groove boards not over 3 inches in face width. These boards should be laid at an angle of 45 degrees to the boards in the first layer. This assures that none of the seams in the linoleum will run in the same direction as the boards of the top layer, and prevents the seams from opening because of expansion or contraction. A less expensive installation is laying the top boards at an angle of 90 degrees to the under floor. However, if this method is employed, the lining felt and linoleum should be laid so that the seams run across—and not parallel with the boards in the top layer. A seam protector is recommended if the laying of the linoleum brings a seam parallel to the direction of the floor boards.

If the floor is an old double floor with a tongue-and-groove top layer, the surface should be examined carefully and all defective boards should be replaced, loose boards renailed, all nails countersunk and uneven joints planed or sanded smooth. Crack wider than %-inch or holes larger than %-inch diameter should be completely filled with wood or plastic wood.

The least expensive way to convert a single tongue-and-groove subfloor into one of double proportions is to cover it with a layer of building paper and hard-pressed wallboard or plywood. Exact specifications should be secured and followed in this installation. If the single subfloor consists of square edged boards, it should be covered with a layer of building paper and a single layer of 25/32-inch kiln-dried, tongue-and-groove.

It might be well to point out that numerous modern builders are recommending permanent linoleum installations in rooms other than kitchen and bath because the linoleum is easy for the housewife to clean and wax, is resilient and quiet.

Linoleum makes a very satisfactory installation over supported concrete subfloors, but care should be taken that there is no moisture lurking in the concrete. Where this condition exists, asphalt tile, which is moisture resistant, is recommended for the flooring. Even though a concrete floor is well ventilated on the underside, moisture in the concrete will eventually ruin an excellent linoleum installation. The Armstrong Cork Company has offered to furnish builders or contractors with a simple but excellent test for determining if the concrete is dry.

Recently poured cement should be allowed to dry for several months before linoleum is installed. While most concrete floors are stone-filled concrete, the builder occasionally is called upon to install linoleum on concrete floors which are poured over cinders. Cinder-fill concrete presents a particular dampness problem and careful tests should be made to determine its dryness.

Smooth, trowel-finished concrete is preferable for linoleum installations. Float-finished concrete is undesirable because it may be rough, dusty or unsound. All concrete floors should be carefully inspected to determine whether the finish coat has a good bond to the under layer and is free from scales or cracks caused by the concrete freezing.

Imperfect concrete can easily be conditioned. Expansion cracks can be filled with a mixture of portland cement and plaster of Paris. Fillers may be used to level off rough spots or hollow.

(Continued to page 97)
KoL-MASTER STOKER-FURNACE UNIT

THE PRICE IS RIGHT!

Owners of low-cost houses want automatic heat. They need low operating cost. The new KoL-MASTER Stoker-Furnace unit gives them what they want and what they need. Low first cost. Low operating cost. This new KoL-MASTER unit is a complete low-cost heating system for low-cost houses. It will help you sell houses. A sure-fire winner with owners when you show them how to get more house for the money by installing a KoL-MASTER. Write today for free KoL-MASTER literature.

WRITE FOR FREE LITERATURE

KoL-MASTER CORP.
OREGON • • • ILLINOIS

News of the Month
Building Activities and Meetings

September Residential Volume Highest for That Month During 11 Year Period

RESIDENTIAL contract awards in 37 eastern states, according to F. W. Dodge Corporation, involved 24,738 projects valued at $152,372,000 during September, as compared with 17,589 projects valued at $129,680,000 in September 1939. This represents a gain of 40.8 per cent in the number of projects and a gain of 17 per cent in their value. September volume equalled that of August. This is the best September total in eleven years, the 1940 value exceeding the September 1929 figure by about $37,000,000. The September 1928 total was over $200,000,000; the same month of this year is approximately 75 per cent of that 1928 figure.

Statistics for the four classes of construction in 37 eastern states are as follows:

37 Eastern States Sept., 1940 Sept., 1939 August, 1940
Residential $152,372,000 $129,680,000 $152,988,000
Non-Residential 101,295,000 82,466,000 119,189,000
Public Works 59,898,000 71,418,000 119,358,000
Utilities 34,086,000 39,663,000 23,406,000
Total $347,651,000 $333,227,000 $414,941,000

Housing Census Figures Announced

DIRECTOR William Lane Austin, of the Bureau of the Census, Department of Commerce, has announced the preliminary figures of the Housing Census in 357 cities of 25,000 inhabitants or more. On April 1, 1940, there were 13,749,593 dwelling units in the 357 cities combined, according to the preliminary count. Of this number, 13,094,392 were occupied by households enumerated in the Population Census at their usual place of residence, and 655,201 were classified under the general heading "vacant." This release includes the cities of 25,000 inhabitants or more for which dwelling unit figures were previously released.

The "vacant" dwelling units amounted to 4.8 per cent of the total. They comprised mainly dwelling units vacant and for sale or rent, but also included some units held for absent households and a small number of units temporarily occupied by non-resident households, that is, by households which reported that their homes were located elsewhere. In later releases, the vacant dwelling units for sale or rent and the other vacant dwelling units will be shown separately.

The figures include dwelling units in resort areas occupied or available for occupancy on a seasonal basis, as well as ordinary units occupied or available for occupancy on a permanent basis.

The number of occupied dwelling units represents approximately the number of families in each city and may be roughly compared with the number of private families reported for each city in the 1930 Census.

Although the average percentage of vacancy in all 357 cities was 4.8, there was a wide range, from less than 1 per cent in the industrial towns of Hamtramck, Mich.; Aliquippa, Pa.; East Chicago, Kokomo, and Marion, Ind.; New Britain, Conn.; and Warren, O., to 23.9 per cent in Warwick, R.I., and 36.2 per cent in Miami Beach, Fla., both seasonal resort cities.

These housing figures are based on preliminary counts made by local supervisors and are subject to revision. Similar preliminary announcements of the number of dwelling units in other cities containing 25,000 inhabitants or more will be made as the figures become available.

Gives Home Laundry Advice

ADVICE that might be just as useful to builders and home planners as to housewives, in respect to intelligent handling of the home laundry problem, was given to an audience in the auditorium of the John Wanamaker store in New York City recently, by Mrs. Ruby G. Littlefield, the director of the General Electric Company's home laundry institute at Bridgeport, Conn.

She pointed out that the laundry room should be planned to serve resident households, that is, by households which reported that their homes were located elsewhere. In later releases, the vacant dwelling units for sale or rent and the other vacant dwelling units will be shown separately.

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She pointed out that the laundry room should be planned to serve several more than one purpose, such as sewing, gardening, canning and storage, and located for plenty of light off the kitchen, if possible.
SUCCESSFUL builders put features into their houses to catch the feminine eye... sales points like colorful, easily cleaned walls and ceilings of Armstrong's De Luxe Monowall. This low-cost wood-fibre board not only offers decorative and practical advantages to the prospect, but has money-saving advantages for the builder as well.

Thirty-three factory-applied colors and patterns are available in Armstrong's Monowall—plain colors as well as tile, wood, and marble effects to blend with any interior schemes. Various size panels (up to 4' x 12') and special channels and moldings create a new note in smart styling. Monowall is smooth like tile, and just as easy to clean. Furthermore, it is so durable that even a solid hammer blow won't mar its glossy finish.

Whether used in new construction or remodeling, Armstrong's Monowall saves time and money for the builder because it is so easy to erect. The large panels are light in weight and readily handled by one man. They can be quickly and permanently installed on walls and ceilings with adhesive. Old plaster (if firm and solid) does not have to be removed.

If you're not already using Armstrong's Monowall in your houses, it will pay you to write today for complete facts and a sample of this decorative, sales-making material. Address Armstrong Cork Company, Building Materials Division, 979 Concord St., Lancaster, Pennsylvania.
Have you discovered the Craw-Fir-Dor? You should. . . .

The Flush Type

Comes with bundle of molding that can be applied in any desired pattern. Door is reversible. Has 8-panel design on back.

$29
Any U.S. Jobbing Center

$28
Any U.S. Jobbing Center

Other two designs are slightly higher.

Have you discovered the Craw-Fir-Dor? You should . . . for here is the most popular overhead-type garage door in the nation. Garage owners and prospective home owners like it because it operates so easily. . . . because it sells for as little as $28. Realtors and builders like it because it gives homes real sales appeal . . . because any carpenter can install one in less than half a day. Dealers like it because it puts them back in the overhead-type garage door business . . . because it never needs servicing.

Investigate now how the four Craw-Fir-Dor designs can serve you. With the introduction of the flush-type design, you have a model to suit every architectural style. Each Craw-Fir-Dor is a tested, approved door of durable Douglas fir with extra strength hardware and an automobile trunk-type lock. It is pre-fitted for an 8' x 7' opening and weather-striped. Needs only 2" headroom and side room. Your dealer has Craw-Fir-Dors or can quickly get one for you. For more information, write Fir Door Institute, Tacoma, Washington.

Now nationally advertised in American Home and Better Homes & Gardens

Introducing
A NEW CRAW-FIR-DOR MODEL

The Flush Type

Celebrating 30 Years of Progress

A FULL generation, exactly thirty years ago, two young brothers, Charles A. and W. Harrison Upson, founded The Upson Company at Lockport, N.Y. Armed with knowledge and a measure of practical experience, they put their ambitions and ideals to work. Specialists in the development of paper products, they sensed the potential market for a dependable wallboard. Two years of intensive research went into the product before any attempt was made to market it. The result was the first wallboard made in 4-ply, the first to be kiln-cured or pre-shrunk, the first to be waterproofed, and the first to be surface-applied so that a low-cost but attractive painted surface might be obtained.

The fact that The Upson Company has been under the same ownership management for thirty years and will continue to be for as far as anyone can foresee is another reason for friendly dealer relationships. Charles A. and W. Harrison Upson are still, after thirty years, the controlling factors.

CHARLES A. Upson, president (left), and W. Harrison Upson, Jr., secretary - treasurer.

Rename Lightweight Channel Section

THE Jones & Laughlin Steel Corporation, Pittsburgh, has changed the name of its lightweight channel section to Junior Channels, in order to better associate the product with the Junior Beam, a structural steel section long known to the construction industry. The Junior Channel, the newest of these structural steel sections and designed especially for stair stringers and stair treads in schools, auditoriums, hotels, Federal Housing Projects, and other light occupancy buildings, was recently announced as the lightest member of its kind in the world, the 10-inch section weighing only 6.5 pounds per foot.

New Packaging for Fastenings and Labeling of Metal Trim

A SURVEY to determine the type of fastening best suited to each individual shape of Wilson Metal Trim has just been completed by the Wilson Metal Products Co., Columbus, Ohio. As a result of this survey the company is including with each stock length of the metal trim an envelope containing the proper type and number of fastenings for use with each particular shape. On each package of screws, escutcheon pins or nails, the size, type and use are plainly marked. A helpful chart is also being supplied to dealers which shows the proper fastenings to be used with each of the 180 individual shapes.

Another outstanding improvement is the individual packaging of Wilson Metal Trim. Each piece is now individually packed in heavy kraft tubing. For easy dealer identification the regular lustre finish is being packed in brown tubing and Alumilite finish in grey tubing, the catalog number of the metal trim being stamped plainly on the outside of the tubing. In addition to its identification value this heavy tubing assures maximum protection for the metal against nicking and scratching in transit. In shipments that include numerous shapes, pieces of the same shape are securely taped together.

NEW PACKAGING FOR FASTENINGS, ETC.

BEGINNING THIS MONTH

The Upson Company

NEW SERVICE

A LIGHT, fast acting, low-cost, underground feed inductance, requiring neither conduit nor neutral, was first engineered by the Upson Company back in 1930. The Overhead Type, a limited edition of .250,000, was designed for local distribution by the University of California's Engineering Experiment Station. The Overhead Type is now being marketed by the Upson Company.

The Upson Company, One Hundred Twenty-First Street, at Lockport, N.Y.
American Builder, November 1940.

New Heating System for Low-Cost Homes

The Kol-Master Corporation, Oregon, Ill., has perfected a new stoker-furnace unit for low-cost automatic heating plants for low-cost houses. The unit includes a counter-flow furnace, circulating fan and filters, and a Kol-Master stoker of suitable capacity. Either the Kol-Master Dial-Set or Weather-Master Model is provided, and the unit is offered in both hopper and bin feed types.

The Kol-Master Dial-Set stoker has a number of features of special interest to owners seeking low-cost operation. It is equipped with a reverse-flight feed screw under the retort that causes a lifting action and distributes coal evenly to all parts of the fuel bed. Positive control of the fuel bed makes possible use of the automatic combustion control featured on the Kol-Master stoker. Domestic models have separate motors on the blower and on the feed.

Introduces New Oil-Fired Furnace

The L. J. Mueller Furnace Company, Milwaukee, Wis., has announced the No. 57 oil-fired furnace, a new and larger model in their Series “30” oil-fired winter air conditioning furnace line. The new No. 57 has a BTU capacity at register of 200,000 and at furnace, 325,000. This, added to the 100,000 capacity of the No. 55 and the 150,000 capacity of the No. 56, provides a capacity range wide enough to meet most requirements.

One of the many features is the fact that the unit is not limited to one fan size only, but fan selection can be made to meet the requirements of the home. The No. 57 has a range in maximum CFM air delivery, at 1/4 inch static pressure, of from 3,500 to 6,400, by merely a change in the fan assembly furnished.

New Low-Cost Oak Flooring

PLANK- FLOOR EFFECT

HERE’s a new idea in hardwood floors! It’s the new factory-finished Streamline Flooring created by Bruce. This genuine, full-thickness hardwood flooring has a smart new width (3/4”) and beveled edges and ends that give the “patterned” appearance of costly plank floors. Its striking new beauty wins praises everywhere. The factory-applied “Bruce-Way” finish on Streamline Flooring amazes home owners. For it won’t scratch, chip or peel like ordinary surface finishes. That’s because the finish is part of the wood. Its lustrous sheen stays beautiful for years.

What’s more, this factory-finished flooring saves time and labor. When it’s laid it’s finished. There’s no sanding or finishing to do. It’s a sensationally superior floor, yet costs no more—often less than ordinary flooring finished on the job. Streamline Flooring comes in Red and White Oak, Maple and Beech. Send coupon for free “Scratch Test” panel.

New Low-Cost Oak Flooring GIVES COSTLY PLANK-FLOOR EFFECT

Begin Research on New Type Heating

A LONG-TIME research program for improvement of home comfort through steam and hot water heating will begin this fall at the University of Illinois. One-pipe forced circulation hot water, a new type of system developed in the last three or four years, will be studied this winter.

The long-time research project will be carried on by the University’s Engineering Experiment Station in co-operation with the Institute of Boiler and Radiator manufacturers. A three-day meeting of the institute’s advisory committee with university engineers closed at Urbana Oct. 12. The committee approved plans for the first winter program, inspected the new I-B-R Research home in which the investigation is to be made, and decided to defer its formal opening until late in the year.

Members of the Institute of Boiler and Radiator manufacturers group who gathered at the university were: R. E. Ferry, New York; institute general manager; L. N. Hunter, Johnstown, Pa., National Radiator Co. research and development engineer; J. F. McIntire, Detroit, Mich., U. S. Radiator Corp. vice president; H. W. Randolph, Utica, N.Y., International Heater Co. vice president; S. K. Smith, Westfield, Mass., H. B. Smith Co. A member of the research committee not able to attend the meeting was J. P. Magos, Chicago, Crane Co. research laboratories director.

New Low-Cost Oak Flooring

GIVES COSTLY PLANK-FLOOR EFFECT

MAKE THIS SCRATCH TEST

“Bruce-Way” Surface Finish

Send for this “Scratch Test” Panel. Half is finished the new “Bruce-Way” used on STREAMLINE Flooring... other half finished the ordinary surface way. Scrape a coin across both finishes. See how the ordinary surface finish scarpes and chips away... while the “Bruce-Way” finish is unharmed.

Streamline (Factory-Finished) Floor

E. L. BRUCE Co. 1474 Thomas Street, Memphis, Tenn.

Gentlemen: Please send me free “Scratch Test” Panel and new illustrated literature on Bruce Streamline Flooring.

Name __________________________

Address _______________________

City ___________________________ State ____________

1474 THOMAS STREET

MEMPHIS, TENN.

Hardwood Flooring + Floor Finishes + Terminals

E. L. BRUCE CO., 1474 Thomas Street, Memphis, Tenn.

Gentlemen: Please send me free “Scratch Test” Panel and new illustrated literature on Bruce Streamline Flooring.

Name __________________________

Address _______________________

City ___________________________ State ____________
What kind of Nails would we use on that New Roof?

A fine new roof—best quality shingles—it should last for twenty years! The shingles will last that long, or longer... but it takes more than shingles and careful laying of them to make a long-lasting roof. There's a little, inexpensive item that's such a small cost factor one way or the other that many builders ignore its importance. And that item is the NAILS THAT HOLD THE ROOF. For no roof is better than the nails that hold it. Rust begins its deadly work immediately with ordinary nails. But Maze Zinclad nails—dipped in pure, molten zinc—resist rust, and last much longer. Conservatively, they will double the life of your shingle roof. They are recommended by the Red Cedar Shingle Bureau. They cost so little more (only 9 cents per square) that it is nothing short of "silly" to economize in this direction! Insist on Maze Zinclads!

Double the Life of Your Shingle Jobs!

In-Built Snack Bar Can Be Used If Owner Prefers Instead of the Conventional Breakfast Nook

The next kitchen illustrated is a variation of the U-type plan with a snack bar; this is an excellent arrangement for the home of larger than average size. Location of the service door and the door to the dining room, near together in one corner, permits a good U arrangement. The snack bar is located in the third corner, and offers a convenient arrangement for serving light meals to children; if preferred, the conventional nook could be used in the same space.

The bar arrangement as shown virtually gives a fourth side to the U and results in an exceptional amount of storage space. There are 53 square feet of shelf space in the wall cabinets and 15% lineal feet of base storage, not counting the two additional cabinets at either end of the bar. This would be ample for a house with an occupancy of seven persons or more.

Except for the extra line of base cabinets, the kitchen is laid out in the traditional U, with the center beneath the windows. Refrigerator and food storage cabinets are at the right near the service entrance.
The Divided U-Type Kitchen Can Be Efficiently Arranged

KITCHENS having doors on opposite walls and at opposite corners, as shown below, require careful planning. The space on the short wall may be used for placement of one of the centers, in this case the refrigerator with food storage cabinets nearby and sufficient counter space on the base unit for food preparation. The counter is also next to the rear door, handy for the deposit of foods on delivery. The distinctive feature of the U-shaped kitchen is thus preserved although with a break in one side of it.

The range sets ideally into the side of the wall nearest the dining room, with ample counter space at hand for serving. This arrangement permits an unusual amount of upper storage space—65 square feet of shelf space in the wall cabinets. The base cabinet storage is reduced somewhat by the break in the U; even so, the full use of the rest of that wall permits 11½ lineal feet of base cabinets. On the whole, this should be ample for six to seven persons.

Variation of U-Type Plan with a Snack Bar

The New Idea in flooring Homes

GET YOUR COPY OF OUR HELPFUL NEW FOLDER

Harmonize floor with furniture . . . that's the modern idea for homes! . . . In the bedroom above, note how the absence of heavy graining in the floor makes for pleasing harmony with the smooth and simple modern furniture. Modern furniture is fine-grained . . . so is Maple . . . and the two live peacefully with each other. Not only Blonde Maple, but other modern furniture looks at home on smooth floors of Maple.

Home-owners—the whole family—will thank you for recommending Hard Maple. It's the longest-wearing comfortable floor and the most ideally suited for modern homes.

WRITE FOR free copy of our new Home Builder folder—includes illustrations in color of maple floor sections in various patterns. Lay MFMA Maple—in strips or blocks.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1781 McCormick Building, Chicago, Illinois

See our catalog data in Sweet's, Sec. 11/78.
Write for folder on floor finishes suitable for homes.
TO MANUFACTURE an improved building product of highest quality at lowest cost—a product that has proven itself in actual permanent construction by reducing costs to level of frame.

TO SUPPLY the entire building trade with more attractive and permanent construction with proven savings at every step, all the way from manufacturing to the finished job.

YOUR COMMUNITY will welcome your contribution to better buildings at lower cost. Your builders and prospective home owners are waiting for this better, lower cost material.

IF YOU ARE THE MAN we will equip you with exclusive line production machinery—Large production. Only one or two men. Equipment costs but fraction of other processes of equal capacity.

WE WILL SUPPLY YOU with processes to enable you to supply product in 40 colors, shades and textures. Your product will be capable of meeting all known building requirements and is now being used by Government-City Building Depts. throughout the country.

WE WILL GRANT YOU Manufacturing Franchise covering your locality—protecting your market, business and future, with available engineering and advertising service.

YOUR EARNING POWER AND FUTURE. Present manufacturers have pioneered the way for you. Some are selling at 100% over cost. Some are getting as high as 80% of the business in their territories.

YOUR OPPORTUNITY IS COMPLETE. Ready made. One that is proven. Ready for you to cash in on the great building upturn under way.

YOU SHOULD INVESTIGATE while your territory is still open. Fill in and return coupon today. No obligation.

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Show me through your free books the proven possibilities of this business and the earning power of an exclusive plant in this territory.

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Address __________________________
City ____________________________ State ____________

How to Arrange Kitchens
(Continued from page 81)

An Efficient Kitchen Can Be Laid Out Along Two Walls with a Window and Sink Located in the Corner

WHEN doors are located on two adjacent sides of the kitchen, as in the layout below, a novel and attractive arrangement is possible by placing the units in the form of an L with a corner window in the angle.

Inasmuch as two walls are entirely devoted to cabinets, all three work centers may be grouped in one continuous arrangement. This leaves the available corner of the other walls as an excellent spot for a dining nook or for placing a movable work table and some chairs.

This arrangement provides a surprising amount of upper cabinet storage considering the large amount of wall space devoted to windows—45 square feet of shelf space, exclusive of the tall cabinet which, if used entirely for shelves, would add 32 square feet. The base cabinet storage is 7 1/2 lineal feet. The total is ample for a house with a normal occupancy of four to five persons and is really quite a sizable one considering that all units are along two walls.

WITH OUTSIDE DOOR on one side near a corner and DINING ROOM DOOR CENTERED OPPOSITE, USE THE TRADITIONAL L

As is frequently the case in simple five- and six-room plans, with kitchen and dining room placed to the rear of the living room extending across the front of the house, there is only one wall of this kitchen entirely free for placing the work centers. (See plan at top of next column.)

Since the door to the outside is at one end of the left wall, however, most of that wall is also available and permits an excellent L arrangement. The space in the opposite corner is well suited for use as a dining nook, either with built-in seats and permanent table or movable table and chairs. The range is convenient, both to the dining nook and to the dining room.

The tall cabinet at the extreme of the L, next to the service door, is convenient for storing implements and materials used in cleaning, also for storage of rubbers, galoshes and other outdoor clothing removed upon entering the house.

Storage for a family of five persons is ample provided in this arrangement. There are 56 square feet of upper cabinet shelf space, including the three upper shelves in the tall cabinet and 6 lineal feet of base cabinet space plus the lower storage space in the tall cabinet.

Windows in the Corner of an L-Shaped Kitchen Arrangement
When All Walls Have Openings, the Broken L Can Be Used

Three doors break up this space so as to prevent a continuous L and the space in the lower left corner is largely used by windows. The largest expanse of wall is logically used to place the sink and the counter for food preparation, with refrigerator at the end next to the door.

There is enough space on the adjoining wall to place the cooking and serving center there, thus giving the effect of an L arrangement. Wall cabinets 30" high over the range make considerable storage available at this center for utensils needed in cooking and dishes needed in serving.

Another factor here that influences the placement of the sink and work counter is the location of the windows. Wherever possible, it is desirable to have the sink beneath a window, even though in some L arrangements this might place the bulk of the counter space on the other leg of the L. The other corner, next to the outside door, makes an excellent spot for table and chairs, or for a built-in dining nook.

*You can order all stock Douglas Fir doors prefitted at slight extra cost and grade-marked.

**TRU-FIT**

Durable Douglas Fir Entrance Doors
give your homes that "final touch"!

- The entrance door is one of the first things a prospect sees when he inspects your houses. An ordinary door does nothing to help you make a sale. But a Tru-Fit Douglas Fir Entrance Door is a big sales aid. Its design is distinctive. It's well-made from old-growth Douglas Fir, the wood that lasts longer. It's well hung because it came to you pre-fitted. It's in perfect condition thanks to the protective packaging and scuff-strips. Select a Tru-Fit Douglas Fir entrance door for your next house and see the difference it makes. 27 designs to choose from, and they cost no more than other good doors.

FIR DOOR INSTITUTE, Tacoma Building, Tacoma, Washington
Please send me your free catalog of Douglas Fir Doors, No. 2000.

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DOUBLE PROTECTION
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THIS TANK IS PORCELAIN
ENAMELED INSIDE AND OUT!

Imagine a hot-water tank whose inside and outside surfaces are as hard and smooth as the porcelain enamel on a kitchen range. You can see how the protection of a porcelain enamel lining would lessen the chances of tank leaks and rusty water; how it would lengthen the life of the tank.

You can order such a tank now and offer your customers this new, improved tank at a price any one can afford. All code requirements are fully met.

When the tank is porcelain enameled on Armco Ingot Iron, you may be sure of first-quality metal. You also can show your customers the famous Armco label, known to millions through more than 25 years of national advertising. Write us. The American Rolling Mill Company, 2801 Curtis Street, Middletown, Ohio.

How to Arrange Kitchens
(Continued from page 83)

When Walls Are Broken Three Work Centers Can Go in Corners

INSIDE kitchens can have all walls so broken up that no one can be entirely used for units. This is usually due to the fact that the one outside wall must be used for both rear entrance door and, at the same time, must contain enough window area to light the room; this door is usually placed in the corner so only a limited number of units are possible along the adjacent wall. As in the plan shown, there is one wall without an opening, but the door of the adjoining wall is so close that cabinets could not be placed its entire length. The problem is nicely solved by treating each work center as an individual unit. The basic triangular relationship between the centers is maintained although it is not possible to join them by a continuous L or U shaped work counter.

The longest available wall space is used for the sink since there is more need here for working surface. There is ample working surface, however, for food preparation near the refrigerator and for serving counter next to the range.

Storage adequate for an occupancy of six persons is indicated by the 52 square feet of shelf space available in wall cabinets and the 10 lineal feet of base cabinet storage.

Individual Work Centers Placed in Corners of Kitchen

Kitchens with Doors Centered on the Two Ends Can Be Arranged with Units Facing Along Other Two Walls

As can be seen in the sketch and floor plan of this kitchen, there are doors at both ends, the traffic lane splitting the kitchen in two and leaving only two walls available for cabinets, these walls being separated.

An effective step-saving arrangement is gained by placing the sink and cleaning center on one wall and the range and refrigerator on the opposite wall.

The tops of base cabinets next to the range and refrigerator serve as food preparing and serving areas. A row of wall cabinets above the range and adjoining base cabinets provides ample storage for packaged foods and cooking and serving dishes.

Storage here is adequate for a normal occupancy of six persons. Shelf space in upper wall cabinets totals 42 square feet exclusive of the tall cabinet which is placed next to the door leading to the outside. Here, it is handy for storage of foods, or clothing and implements. If used entirely for shelf storage, it would add 24 square feet, or it may be supplied for storage of brooms, mops or vacuum cleaner with three shelves (9 square feet) above. The base cabinets amount to 10½ lineal feet.
Corridor Type with Units on Two Opposite Kitchen Walls

Long, Narrow Space Like Kitchenette Has Units on One Wall

WHERE the space is extremely long and narrow, or where there is only one wall relatively unbroken by windows or doorways, the arrangement above is indicated. This places all work centers in one unbroken sequence, with a continuous working counter connecting them. This may require a few more steps to move from one work center to another, but the arrangement is such that work may be done at the various work centers, moving in orderly sequence from the preparation stage, near the refrigerator and food storage cabinets to the serving center, with the cleaning operations afterward located at or near the sink. The range is thus at the opposite end of the counter from the refrigerator, near the door to the dining room. A movable table for use while serving would be a handy adjunct.

The arrangement does not permit as much upper cabinet space as would ordinarily be needed in connection with the base cabinet storage. There are 33 square feet of shelf space in the wall cabinets, 6 lineal feet of base cabinet storage. This would be enough, however, for an occupancy of three to four, possibly five, persons.

In many kitchens of this type, the opposite wall, not shown in the above floor plan, may provide space in which table and chairs may be placed.

MASONITE PRESWDWOOD TEMPRTILE

... SPOTLESS LUXURY AT LOW COST

Lots of the “finishing touches” run into lots of money. But you needn’t strain the budget to achieve tile-effects these days. Masonite Preswood Temptrtile produces truly beautiful tile-like walls for an exceptionally reasonable price. It is a hard, grainless, wood-fiber board that comes in 4 x 12 ft. pieces — already grooved. It can be installed with ordinary wood-working tools. It can be painted or enameled. And — it’s permanent!

Once it’s properly applied, it will neither warp, chip, split nor crack, and there’s no breakage. Illustrated here is a scheme for an interesting kitchen arrangement that can be finished for surprisingly little — using Masonite Preswood Temptrtile for the walls and Tempered Preswood for built-in features.

MASONITE CORPORATION, Dept. AB-11-40
111 W. Washington St., Chicago, Ill.

If you would like to examine a sample of Masonite Preswood Temptrtile FREE, just fill in and mail this coupon to:

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Name
Address
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"IF YOU WANT A SMOOTH RUNNING BRACE — THIS IS IT!"

There's a comfortable "feel" about this Stanley Bit Brace you'll note the minute you pick it up. Balance is just right for easy, straight driving. Other quality features include the cocobolo head and handle, the extra heavy steel bow and the strong, sturdy box ratchet. Forged steel Universal jaws hold straight shank bits from 1/4" to 1/2", taper shanks up to Clark's No. 2 expansive bit. Ask to see the No. 923 Bit Brace at your dealer's. Write for free Stanley Tool Catalog 34.

Other Quality Features!
Head turns on ball bearings and a bronze bushing for easier action and longer life.
Threaded handle collars are swaged to bow — they can't work loose.
Nut and cotter pin lock entire chuck in place. Universal jaws are designed so they will not bend, jam, slip or come out.

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DIVISION OF THE STANLEY WORKS
NEW BRITAIN, CONN., U. S. A.

LETTERS from Readers on All Subjects
Facts, opinions and advice welcomed here

How to Paint Asbestos Siding
To the Editor:

In the September issue of the American Builder we have noticed the first of a series of articles on the asbestos industry, including, naturally, data on asbestos siding.

In this office we have received numerous inquiries for the proper formulas and mixing instructions for painting asbestos shingles and clapboards. Although these materials do not need painting when first installed, some of our inquiries are concerned with the owner's desire to change his decorative styling, others where staining from flashing and other parts or dirt discoloration has taken place. In view of these requests we feel that you may be interested in the painting procedure for asbestos siding as follows:

If asbestos siding has not weathered sufficiently to neutralize alkali in the cement, wash with solution of two pounds zinc sulphate to one gallon of water. Allow to dry thoroughly before applying paint. Apply three coats of paint brushed on well to seal surface, allowing for uneven paint absorption in priming coat by the porous surface. For the priming coat use 3 parts (by volume) soft paste white lead, and 5 parts half and half mixture of raw linseed oil and lead mixing or reducing oil. Follow with body and finish coats of 3 parts white lead with 4 parts lead mixing or reducing oil. Add colors in oil to the paint as desired for any shade or tint.

LEAD INDUSTRIES ASSOCIATION,
By Richard B. Edwards.

An Aid to Future Builders
To the Editor:

Can you give me information as to where I can secure a book of small duplex house plans? Kindly send me your latest book list.

We have been receiving the American Builder, through local lumber dealers, for a number of years. Students in our drafting classes literally wear them out, enjoying them, and we look forward each month to their arrival for fresh material and new ideas. Permit me to express my appreciation for this aid to teaching.

LANIER HIGH SCHOOL,
Department of Manual Arts,
By H. L. Weatherby.

Defense Program and Building
To the Editor:

We have been informed that the USHA, through its local Housing Committee, has been gathering local housing data with a view to embarking under a huge local government subsidized housing program.

That heavily overworked term "National Emergency" will be called on, no doubt, to justify further activity and growth of this bureaucratic barnacle.

But the term "National Emergency" cannot be spread widely or thickly enough to cover the fact, that local private building industry is already prepared to take care of any housing need which may arise, due to industrial expansion for the production of war materials.

Nor will it be able to dim the fact that skilled industrial workers will be paid a wage which will put them beyond the need of government subsidies in housing, a fact which must be obvious to anyone but a bureaucrat, so entirely and unconsciously immersed in the current milk and honey governmental appropriations flood, as to be completely isolated from both reason and logic.

The Defense Program is set up to preserve our present system of Democracy. One of the important supporting pillars of that Democracy is intelligently regulated Private Enterprise.

It is important to the safety and success of that Program, that
undermining bureaucratic Fifth Columnists be suppressed as ruthlessly as any other type.

And any Bureaucracy which masses its heavy appropriation artillery for an attack on any branch of industry which is doing its job efficiently, is creating an unnecessary and dangerous disturbance which should be classed as the worst type of Fifth Column Activity.

Government has called upon Labor and Industry to put their houses in order. Perhaps it would not be amiss at this time, to ask Government to check its closets and corners for a bit of overlooked dust and grime.

W. J. GUINAN, Executive Director,
Builders Association of Metropolitan Detroit.

Nice Looking Job

To the Editor:

I am enclosing a picture of a new home (above) that I recently completed; the plan was found in your September, 1938, issue. Enclosed is my check for $2.00 for a year’s subscription to the American Builder.

CLARENCE SCHULER.

"Fair" House But Not a Fair Price

To the Editor:

One of our dealers in Minnesota visited our office a short time ago and at that time we discussed small home costs. This dealer referred to a house which appeared in your June issue for 1940 on page 47, namely, the $3,100 house for the typical American family which is on display at the New York World’s Fair.

The cost as published, namely $3,100, is certainly ‘way too low even on the basis of prices before recent price advances. In this particular locality this house came to about $4,700 which is $1,600 over the published price. The fact that the prospect had picked this design out himself before consulting the lumber dealer and had this $3,100 price fixed in his mind made it very embarrassing for our dealer as the prospect thought that he was being overcharged when quoted a price of $4,700.

Roughly figuring this house on a cubic footage basis and assuming the house to contain about 16,000 cubic feet, we arrived at a cubic foot cost of less than 20 cents. This is out of line for a home of this kind with hot water heat, a fireplace, and standard medium grade equipment.

In fairness to the American Builder magazine, we know that the costs were not determined by your staff and, therefore, you are not in any way responsible but we do think it would be well to watch the publication of such cost figures very carefully in order to prevent misunderstandings by the buying public.

We thought it advisable to write you regarding this situation as it might assist you in determining the course to follow in publishing information as to cost of new designs which will appear from time to time in the American Builder. You are doing a splendid job in the publishing of the designs, articles, and miscellaneous information important to the builder and lumber dealer. We know full well how hard it is to please everyone. We also know how difficult it is to publish any cost figures without someone saying that they are either too low or too high.

NORTHWESTERN LUMBERMEN'S ASSOCIATION,
By D. J. C. Parsons, Architectural Dept.

(Continued to page 88)
“Knotty Pine On The Walls—Is Money In The Bank”

... says Mr. Milo Gonser, enterprising builder of Detroit, Mich. “A 50% increase in my business is directly due to the attractive appearance of rooms finished in knotty pine.” Gonser built homes are not only good looking, they are built to last—another reason why they sell so fast. Mr. Gonser uses the Western Pines for exterior and interior trim, built-in fixtures, doors, sash, window frames, screens, shutters, and framing.

THE WESTERN PINES WILL DO YOUR NEXT JOB BETTER—TRY THEM

Western Pine Association, Yeon Building, Portland, Oregon

*Idaho White Pine  *Ponderosa Pine

*Sugar Pine

*THESE ARE THE WESTERN PINES

LETTERS—
Preparedness?

New York, N.Y.

To the Editor:
I will appreciate it if you will please inform me if you have a book of instructions as to how to build “bombproof shelters” which may soon be popular.

If you don’t have a book that may give one some idea of this class of buildings, perhaps you may be able to recommend some company either in this country or England who publishes one.

WILLIAM J. BENKO.

Likes “Security” Material

Red Bank, N.J.

To the Editor:
Are you going to have any reprints of pages 38 and 39, “The Best Investment You Can Make,” of your October issue? If so, and you are going to also include pages 40 and 41 and the block on page 47 regarding chiseling, sub-standard products, etc., our members may be interested. My first choice would be pages 38 and 39. You have done a good job. Please quote reprints in 100 lots and 1,000 lots and I will see what they want to do.

E. H. CHRISTY, Secretary, Material Men’s Club.

Another Reaction to September Editorial

Palm Beach, Fla.

To the Editor:
Kindly advise if you have any reprints of your editorial, “Business Under the New Deal,” by Samuel O. Dunn in the American Builder of September, 1940. I consider this one of the best arguments in favor of changing over from the New Deal policies which I have read, and should appeal to any businessman.

Please advise if these are available and the cost of same.

By H. R. Corwin.

WILSON LEADS
WITH A NEW DEALER HELP

NOW! ONLY 2 PRICES
FOR STANDARD SINK RIMS

Wilson Precision-Bent Sink Rims, flat-top or drop-type, are now grouped by size at two list prices only. Nos. 23, 24, 24-A, 25 and 25-B, in sizes up to and including 21”x32”, $2.20 ea. in lots of 12 or more; larger than 21”x32”, up to and including 21”x42”, $2.70 in lots of 12 or more. Other prices on request.

FREE Ask for new 8-page folder, “Details of Linoleum Covered Sink Top Construction.”

Wilson METAL PRODUCTS CO., COLUMBUS, O.
The Editors have prepared a 28 PAGE EXPLANATION of American Builder's "TruCost" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address American Builder, 30 Church St., New York City.


"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 122 lin. ft.; Trench Walls, 23 lin. ft.; Basement Floor, 8.25 sq. ft.; Excavation per ft. deep, 34 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 8.25 sqs.; Ceiling, 3.25 sqs.; Roof Pitch, 9° rise per ft. run; Roof, 10.00 sqs.; Front and OS French Doors, 3 opgs.; Inside Doors and Cased Opgs., 15 opgs.; Windows and Casements, 22 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 50 sqs.

Pages 44. November: Hunter, Archt.


(Continued to page 90)
FOR MEN WHO USE PORTLAND CEMENT
AT TEMPERATURES BELOW 50° F.

YOU KNOW the effects that freezing temperatures have on concrete. But are you aware of these facts:

1. Temperatures above freezing—even as high as 50° F.—seriously affect the strength of concrete.
2. Solvay Calcium Chloride in the mix produces a remarkable increase in early strength, particularly at lower temperatures . . . increases final strength 7 to 12%.
3. Calcium chloride provides extra cold weather protection—shortens protection period—cuts cost of labor, heaters, fuel and canvas.
4. Calcium chloride accomplishes uniform curing—makes the mix more workable, thus producing denser, more waterproof concrete.
5. Does all this without changing the normal chemical action of the portland cement.
6. Results of tests by the National Bureau of Standards, Portland Cement Association, American Road Builders Association, and Highway Research Board are contained in our 48 page book "Calcium Chloride and Portland Cement:"

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Gentlemen: Kindly send me a free copy of your booklet "Calcium Chloride and Portland Cement:"

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Address
City State 34-1140

TRUCOST Figures—
(Continued from page 89)

Opzs., 14 opzs.; Windows and Casements, 24 opzs.; Gable Sash and Louvers, 2 opzs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 75 sqs.; Porch Ceilings, 50 sqs.; Porch Beam, 16 lin. ft.; Porch and Balcony Post and Newels, 2; Porch Cornice, 16 lin. ft.; Picket Fence, 26 lin. ft.

Page 45, November: Hunter, Archt.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 880 sq. ft.; Garage Floor, 170 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 17.25 sqs.; First Floor, 8.80 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Ceiling, 9.50 sqs.; Roof Pitch, 10° rise per ft. run; Roof, 14.35 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 132 lin. ft.; Inside Finishes OS Walls, 126 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opzs., 14 opgs.; Windows and Casements, 15 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 1.00 sqs.; Porch Ceilings, 50 sqs.; Porch Beam, 20 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.18 sqs.; Porch Cornice, 22 lin. ft.

Page 46, November: Hunter, Archt.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 128 lin. ft.; Trench Walls, 66 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 170 sq. ft.; Excavation per ft. deep, 34 cu. yds.; Outside Walls, 20.50 sqs.; First Floor, 8.00 sqs.; Second Floor, without fin. flg., 4.00 sqs.; Ceiling, 9.70 sqs.; Roof Pitch, 10° rise per ft. run; Roof, incl. Porch, 10.00 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, incl. Porch, C & F, 175 lin. ft.; Partitions, 130 lin. ft.; Inside Finishes OS Walls, 128 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opzs., 13 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1;

Whether you are building the "House of Tomorrow" or a modest bungalow—be sure to install a Peerless Fireplace Damper.

Your assurance of perfect fireplace operation.

Write for free descriptive booklet "Tomorrow's products for Today's homes"

PEERLESS MANUFACTURING CORPORATION
LOUISVILLE, KENTUCKY
**American Builder, November 1940.**

Porch Floor, .96 sqs.; Porch Ceilings, .96 sqs.; Porch Beam, 20 lin. ft.; Porch and Balcony Post and Newels, 5.

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Page 47, November; Barrows, Archt.

**"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE:** Trench Walls, 200 lin. ft.; Heater Rm. Floor, 25 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 33 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 7.50 sqs.; Ceiling, 9.50 sqs.; Roof Pitch, 7° rise per ft. run; Roof, 12.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 112 lin. ft.; Inside Finish OS Walls, 112 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opjs., 12 opgs.; Windows and Casements, 12 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 26 lin. ft.; Porch Floor, 1.00 sqs.; Porch Ceilings, .80 sqs.; Porch Beam, 26 lin. ft.; Porch and Balcony Post and Newels, 2; Porch Roof, 1.28 sqs.; Porch Cornice, 32 lin. ft.

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Page 48, November; Barrows, Archt.

**"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE:** Trench Walls, 158 lin. ft.; Laundry & Heater Room Floor, 100 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 28 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 5.70 sqs.; Second Floor, with fin. flg., 5.00 sqs.; Second Floor, without fin. flg., 7.25 sqs.; Ceiling, 10.70 sqs.; Roof Pitch, 10° rise per ft. run; Roof, 12.40 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 175 lin. ft.; Cornice, 4", 88 lin. ft.; Partitions, 175 lin. ft.; Inside Finish OS Walls, 196 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opjs., 13 opgs.; Windows and Casements, 16 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1; Picket Fence Rail, 42 lin. ft.

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Page 49, November; Barrows, Archt.

**"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE:** Basement Walls, 76 lin. ft.; Trench Walls, 120 lin. ft.; (Continued to page 92)

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**BIG MONEY SURFACING FLOORS**

American Floor Sanders are making big money for a lot of men (we'll send you their names and pictures). There is no reason in the world why you shouldn't also be making this big money.

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You already know a lot about the building game and this is a real chance to get into something for yourself and be your own boss.

**EASY TO RUN**

American floor sanders are easy to run. There is no hand scraping the American way and no skill required—in fact, inside of a few hours you can run one as well as an "old timer." American Sanders are easy to take from job to job and you don't need any helpers. Sometime during every man's life he has to decide whether to go ahead and "be somebody" or stay in the same old rut.

**GET DETAILS**

Find out more about this interesting money-making work today by signing and sending in the coupon below for free details.

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Overhead Type Doors

**Crow's Foot** Outer Bearing Support—Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

**Ro-To Live** Spring—A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.

**Zip-Lock** Adjustment—Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.

**Tailor Made** Spring—Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

Parkerized and Painted Hardware—Ro-Way Hardware and Tracks are given finest known protection against rust and corrosion . . . same method as used on fine motor cars, refrigerators, etc.

Authorized Distributors in all Principal Cities will give you prompt service on Extra Value Ro-Way Doors for Residential, Commercial and Industrial use.

**Write for Ro-Way Door Folders, Prices and complete information.**

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**5 EXTRA VALUES at No Extra Cost**

That's What You Get in Ro-WAY OVERHEAD TYPE DOORS

1. **Crow's Foot** Outer Bearing Support—Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

2. **Ro-To Live** Spring—A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.


4. **Tailor Made** Spring—Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

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Authorized Distributors in all Principal Cities will give you prompt service on Extra Value Ro-Way Doors for Residential, Commercial and Industrial use.

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**ROWE MANUFACTURING CO.**

706 Holton Street • Galesburg, Ill., U.S.A.

"There's a Ro-WAY for Every Door Way"
TruCost Figures—
(Continued from page 91)
Basement Floor, 330 sq. ft.; Excavation per ft. deep, 32 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 7.68 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Roof Pitch, 9° rise per ft. run; Roof, 11.00 sqs.; Hips and Valleys, 12 lin. ft.; Cornice, C & F, 130 lin. ft.; Cornice, 4", 90 lin. ft.; Partitions, 112 lin. ft.; Inside Finish OS Walls, 112 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 13 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 124 sqs.; Porch Ceilings, 1.14 sqs.; Porch Beam, 34 lin. ft.; Porch and Balcony Post and Newels, 3; Porch Roof, 1.84 sqs.; Porch Cornice, 42 lin. ft.

Page 56, November: Will, Bldr.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 60 lin ft.; Basement Floor, 700 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 7.00 sqs.; Second Floor, with fin. flg., 7.00 sqs.; Ceiling, 14.00 sqs.; Roof Pitch, 8° rise per ft. run; Roof, 10.88 sqs.; Cornice, C & F, 130 lin. ft.; Cornice, 6", 130 lin. ft.; Partitions, 136 lin. ft.; Inside Finish OS Walls, 220 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 160 sqs.; Porch Ceilings, 1.60 sqs.; Porch Beam, 50 lin. ft.; Porch and Balcony Post and Newels, 15; Porch Roof, 3.00 sqs.; Porch Cornice, 64 lin. ft.; Porch and Deck Rail, 33 lin. ft.

Page 57, November: Will, Bldr.
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 66 lin. ft.; Basement Floor, 720 sq. ft.; Excavation per ft. deep, 31 cu. yds.; Outside Walls, 17.00 sqs.; First Floor, 7.20 sqs.; Second Floor, with fin. flg., 7.20 sqs.; Ceiling, 14.40 sqs.; Roof Pitch, 7° rise

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The T. L. Smith Company
2849 North 32nd St.
Milwaukee, Wisconsin

Smith Mixers
SMITH MIXERS
THE BOULDER DAM MIXERS
Page 59, November: Freeman, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 250 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, incl. Garage, 1500 sq. ft.; Excavation per ft. deep, 65 cu. yds.; Outside Walls, 22.00 sqs.; First Floor, 14.30 sqs.; Second Floor, with fin. flg., 6.00 sqs.; Second Floor, without fin. flg., 1.50 sqs.; Ceiling, 20.30 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 21.00 sqs.; Hips and Valleys, 325 lin. ft.; Cornice, C & F, 250 lin. ft.; Cornice, 4", 175 lin. ft.; Partitions, 325 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opgs., 40 opgs.; Windows and Casements, 31 opgs.; Chimney, 30 lin. ft.; Main Stairs, 1; Porch Floor, 2.50 sqs.; Porch and Deck Rail, 56 lin. ft.

Oil Burner Exhibition Planned

SPACE reservations can now be made for the Oil Burner Institute's National Oil Burner Progress Exhibition to be held at the Commercial Museum, Philadelphia, March 17 through 22 next. In announcing the general opening of space, C. F. Curtin, secretary of the Institute, has urged manufacturers of oil burners, manufacturers of oil burning accessory equipment, including air conditioning, fuel oil companies and other eligible exhibitors to be sure to engage sufficient booth space early by communicating with him at 30 Rockefeller Plaza, New York City.

"Do it fast, do it right" is SPEEDMATIC's record. That is why thousands of builders the country over are turning to SPEEDMATIC. You, too, will turn "SPEEDMATIC" once you try it on your toughest jobs of cutting wood, tile and other materials. You will see why it is the best saw buy on the market today. Ask for free demonstration.

WHERE YOU CAN FIND YOUR NEXT ORDER

INCREASE YOUR PROFIT on each job!

Sand floors the quick, money-making way with SPEEDMATIC Floor Sanders. Cut with surface speed of 2825 ft. per minute. Smooth, cleaner, easier. Write for details.
The same features that made Reo Shingles so popular forty odd years ago still give them a big competitive advantage today. Reo Steel Shingles have full length interlocking seams, wide flanges with nail holes covered and extra quality galvanizing. They protect from fire, lightning and weather. They are easy to install. Yet they present the handsome appearance of individual shingles and they cost less. The profit margins for dealers and contractors are liberal. Write for Catalog No. 95.

THE EDWARDS MANUFACTURING CO.
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$265 Sawed Off

"Besides saving, we find all cuts uniform lengths, square and smooth. A measuring stick laid out by foreman is kept on radial saw at all times and pieces cut ganged up for maximum number of pieces cut at one time.

'We are now using radial saw on smaller jobs with approximately 7,000 ft. of framing material and find our cutting is reduced to about 8 hrs. for 1 man, with the same uniformity in cuts saving much in dollars and cents."

Strother has an unusual setup in that he also operates the Mattawan Builders' Hardware Co., handling an extensive line of builders' hardware and specialties. In the
rear of his hardware store he maintains his shop and supply of lumber and materials. With the complete equipment available in this shop Strother is able to turn out practically any kind of trim and millwork required in the average residential and commercial building. The modern woodworking equipment is so versatile that he is able to turn out his own millwork at very reasonable costs, and this branch of the business proves an important part of his building construction work.

At the present time Strother has a large number of houses under construction scattered over the neighboring counties and has made a name for the performing of quality work at a reasonable price. While the bulk of his construction has been residential work, he also does considerable light-load-bearing and commercial buildings, such as taverns, restaurants and roadside stands, (Continued to page 96)

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Louie — for smooth, elegant finishes! Louie REZ seals and primes for plywood, doors, millwork, furniture, cabinet work. This amazing synthetic resin sealer provides a perfect base that stays hard and smooth under any kind of finishing material — stain, paint, enamel. Saves a coat of paint, controls grain raise, minimizes moisture absorption, checking, decay. Millions of gallons proven in use. Endorsed by wood product manufacturers, associations, architects, contractors. Ask your dealer today.

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Metal Trims for every need... floors, walls, counters, etc.—doors, stores, offices—over 900 designs, shapes, sizes—in the line trademarked CHROMEDGE.

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When you build houses to sell, comfort appeal is your key to success! And reliable, vented, gas-fired PAYNEHEAT is comfort appeal at its level best. Advanced in design, engineered for lifetime service, streamlined PAYNE Furnaces are specified by successful builders the country over. For information, see your PAYNE Dealer or Gas Company. Or write us.

Illustrated is the PAYNE Forced Air Unit—Central heating and ventilating for small homes without basement. PAYNE also manufactures Gravity Furnaces, Zoneair Winter Air Conditioning Units, Duplex Furnaces, Floor Furnaces and Modern Consoles.

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YOUR CHRISTMAS GIFT
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RAMSEY and SLEEPER'S
ARCHITECTURAL
GRAPHIC STANDARDS

Nothing could be more welcome to an architect than a presentation copy of this book. Here is what the “American Architect and Architecture” says about the current edition:

“The first edition of this work, published several years ago, constituted a milestone among architectural reference books. It seemed at that time that additions and improvements would be made only with great difficulty, if at all. Nevertheless, the present volume has been thoroughly revised, improved, and added to in further practical aid of the architectural office. There seems to be every indication that Messrs. Ramsey and Sleeper will be saddled with a responsibility for continuing production very much as was the late F. E. Kidder in connection with his Handbook.”

Known all over the world as an essential tool in the architectural profession, “Ramsey and Sleeper” is the perfect gift for Christmas 1940. Order your copies now.

Second Edition (1936) $6.00


$265 Sawed Off

(Continued from page 95)

e. He has turned out some very attractive tavern bar layouts with his woodworking equipment—another profitable type of business. Strother’s experience is an excellent illustration of the fact that the builder who is equipped in a practical and sensible manner, with a moderate price, with efficient modern power equipment is in a position to profit by the current expansion in construction.

Shop Built Panels

(Continued from page 46)

cent to the present site and a substantial financial backing which indicates that it plans to be in business there for many years. Aside from the construction angle, the handling of Radrock Estates has also been commendable. Architect R. C. Hunter, who is well known in the residential field, has designed an unusual collection of attractive homes. The site has been artistically laid out with curved streets and well placed houses. In fact, it is a project well worth watching as one of the outstanding residential developments of the country.

A brief list of the quality materials and equipment used include the following:

HEATING—Sunbeam gas-fired winter air conditioning units by American Radiator Co.

PLUMBING—W. A. Case and Son, Buffalo, N.Y.

WINDOWS—Croft steel windows, complete with operators and screens, by Croft Steel Windows, Inc., Jersey City, N.J.

FOUNDATIONS—10” concrete block with waterproof cement plaster and tar coat.
FLASHING—16 oz. Anaconda copper throughout, also termite shields.

WATER PIPES—Anaconda copper tubing throughout.

INSULATION—Kimsul blanket-type insulation by Kimberly-Clark Co.

BUILDING PAPER—Sisalkraft.

PLYWOOD—Douglas Fir Plyscord sheathing. Interior walls 1/2" Douglas Fir Plywall given Rezite treatment at factory to resist moisture.

PAINT—Pure white lead and oil.

WINDOW GLASS—Double-thick Libbey-Owens-Ford.

KITCHEN RANGE—Magic Chef.

LINOLEUM IN KITCHEN AND BATHROOM—Armstrong.

MEDICINE CABINETS—Ketcham and Miami.

How to Lay Linoleum

(Continued from page 75)

places. If the cement is dusty, it should be swept with a size or filler.

The alkali on all concrete floors should be neutralized by applying an inexpensive mixture of 1/4 pound of zinc sulphate in ten quarts of water. This, at the same time, will settle the dust. If the concrete is covered with a good, single coat of paint, it should be scored with a wire brush. Varnish, oil, wax and grease should be removed by scrubbing with a strong solution of trisodium phosphate or, if necessary, by scraping and sanding until it is thoroughly clean.

The same recommendations should be followed in working with terrazzo, marble and ceramic tile subfloors. In addition, these

(Continued to page 98)
Fastest and Most Powerful
ELECTRIC HAMMER
ON THE MARKET

If you want to save real money and speed up work try the new

No. 25 SYNTRON Hammer
Drills up to 2" holes in concrete. Cuts openings thru floors and walls. Vibrates concrete forms, etc.

SYNTRON CO., 618 Lexington Ave., Homer City, Pa.

MODERN KITCHENS
demand
MODERN FLOORING

For quick sales or rentals, no home luxury has greater appeal than the most modern of floors—WRIGHT RUBBER TILE. Its richness, resilience, color harmony, and easy-cleaning features add the final decisive touch to the "kitchen of the future." Available in two types and two price levels—WRIGHTEX and WRIGHTFLOOR. Both come in many attractive colors and patterns to harmonize with any decorative scheme. Write for Literature and easy-laying instructions.

WRIGHT RUBBER PRODUCTS CO.
1603 Layard Ave., Racine, Wis.

American Builder, November 1940.
(Continued from page 97)

Wood materials must be thoroughly machine-scrubbed with soapy water and clean, sharp sand.

Magnesite floors are slow drying and quite often old ones are structurally weak. Before laying linoleum over magnesite, it is advisable to send a complete description of the condition to the floor covering manufacturer for job recommendation.

In general, linoleum makes an extremely satisfactory flooring for homes or commercial establishments, and complete satisfaction is virtually assured if conditions governing the subfloors are followed according to exact specifications.

* * *

National Defense Program
(Continued from page 38)

Defense Housing Coordinator C. F. Palmer has estimated that from 160,000 to 200,000 housing units will be needed for defense housing. Of this $700,000,000 program, more than half will be done by private enterprise. In its early stages defense housing consists of housing for families of Army and Navy personnel and for civilian employees of the Army and Navy. Of the first Army allocation of $45,762,500 announced October 7 for some 13,000 dwelling units, practically all were at army posts and airports to house the married Army personnel. Congress has limited the amount that may be spent to $3,500 per unit.

Next in importance in the defense housing program are dwellings for civilian defense workers in industrial plants where private enterprise is unable to supply housing. There is a need for housing of this type, for example, in a region where a new munitions or powder plant is erected. This type of plant is frequently located away from established communities, and private industry can hardly be expected to erect housing for such workers, whose jobs may not be permanent.

An interesting angle in connection with the legislation permitting the defense housing was the fashion in which Congress apparently went out of its way to keep this work out of the hands of USHA. Congress refused to provide additional sub-

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of American Builder and Building Age published monthly at Chicago, Ill., for Oct. 1, 1940.

State of Illinois .
County of Cook

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Bernard L. Johnson, who, having been duly sworn according to law, deposes and says that he is the Editor of the American Builder and Building Age and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, (and if a daily paper, the circulation), etc., of the same publication, for the date shown on this form.

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Simmons-Boardman Publishing Corporation, 100 W. Adams St., Chicago, Ill.; Editor, B. L. Johnson, 105 W. Adams St., Chicago, Ill.; Managing Editor, R. E. Sanger, 165 W. Adams St., Chicago, Ill.; Business Manager, Robert H. Morris, 165 W. Adams St., Chicago, Ill.

2. That the owners are: Simmons-Boardman Publishing Corporation, 20 Church Street, New York, N.Y.; stockholders are 1 per cent or more of the total amount of stock are: J. R. Conger, 13 Pilgrim Dr., Portsea, Manor, N.J.; T. L. Golliher, 165 W. Adams St., Chicago, Ill.; J. M. Weis, 123 Walnut Street, St. Louis, Mo.; J. J. Traut, 105 W. Adams St., Chicago, Ill.; A. H. Lechler, 165 W. Adams St., Chicago, Ill.; S. A. B. Sanger, 105 W. Adams St., Chicago, Ill.; R. E. Sanger, 105 W. Adams St., Chicago, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also the names of the owners, stockholders, and security holders as they appear upon the books of any affiliated companies and the names of the owners, stockholders, and security holders, if any, of such affiliated companies as they appear upon the books of this company as trustee or in any other fiduciary relation, the name of the person or corporation having such trust or fiduciary relationship if it is other than the person named as owner, stockholder, or security holder, and the amount of interest owned or held by each such other person or corporation, and that the two paragraphs contain statements embracing all of the company's full knowledge and belief as to the circumstances and conditions under which the interest of each such other person or corporation may appear upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation having such trust or fiduciary relationship if it is other than the person named as owner, stockholder, or security holder, and the amount of interest owned or held by each such other person or corporation.

BERNARD L. JOHNSON, Editor.
Sworn to and subscribed before me this 27th day of September, 1940.
Industries for USHA. As finally approved, the defense housing program is largely in the hands of Administrator John M. Carmody of the Federal Works Administration. He is empowered to carry out the housing program through Federal or private agencies best suited to the job. Thus the USHA local housing authorities may be called upon in certain areas to handle defense housing.

However, the first large volume of work allocated was placed through the Public Buildings Administration under the direction of Commissioner W. E. Reynolds. Carmody may call on PWA, WPA or any other government agency to co-operate in the defense housing. A complete statement on the operation of the defense housing program is given on page 39 by Housing Coordinator C. F. Palmer.

Industrial Construction Rushed

Far reaching in the economic effect on the nation is the vast industrial building program that has taken place in connection with industries expanded by the national defense program. Among the industrial structures that are being rushed to completion are new airplane plants and additions to old ones, machine tool plants, ammunition and powder works and additions to numerous structures in steel and metal working industries.

A striking example of the speed with which this type of work is being rushed to completion is the record recently hung up by the Turner Construction Co. of New York. This firm recently completed a 640' x 280' addition to the Pratt & Whitney Aircraft Works at East Hartford, Conn., in 40 actual working days, or less than two calendar months. This structure, which was designed by Albert Kahn, had a total of 187,000 sq. ft. of floor space, equivalent to about 4½ acres, and required some 1,100 tons of structural steel.

In work of this kind, both government and private employers have been calling on experienced and qualified firms capable of getting quick action and at the same time turning out an exacting job. Turner has also built in record time a 175' x 100' machine shop for the Bullard Co. of Bridgeport, Conn., machine (Continued to page 100)

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National Coal Association
The National Organization of Bituminous Coal Producers

Frank Adam
Electric Company
St. Louis
National Defense Program
(Continued from page 99)

tool manufacturers, and a 360' x 94' foundry for the same firm. This firm is engaged in building a 610' x 80' addition to the Hamilton Standard Propeller Co., is one of a group of contractors engaged in important naval and air bases, and is the contractor on Army cantonment construction at Fort Dix, N.J.

Cost-Plus-Fixed-Fee Contracts

The new type of contract extensively used in government work is the cost-plus-a-fixed-fee, which has replaced the old lump sum award of the past. In discussing the features of this type of contract, Henry C. Turner, president of the Turner Construction Co., pointed out that it speeds up work by starting construction in advance of the time that plans and specifications could be prepared with the completeness necessary for sound competitive bidding. Also of importance, it establishes a cooperative arrangement under which the owner, the architect and the builder have a common incentive to use their full knowledge and effort to produce well-planned, well-executed work in the most economical manner as rapidly as possible.

Mr. Turner pointed out that in April, 1939, the Bureau of Yards and Docks of the U. S. Navy was authorized by Congress to employ the cost-plus-a-fixed-fee method in the award of emergency construction contracts. As a result, more than a year has been saved in the construction of Naval air bases in the Pacific, a series of projects for which contracts were awarded to the Turner Co., the Raymond Concrete Pile Co., and the Hawaiian Dredging Co.

A similar type of contract has also been authorized by the War Department and is now applying to emergency army construction work.

"It must be remembered," Mr. Turner continued, "that under this form of contract, the owner pays only the actual cost and this might be lower than under competitive bidding through the elimination of contingency allowances which the builder includes under lump-sum bidding. This is a favorable probability,
for in our long experience the profits on lump-sum contracts have averaged larger than on fee contracts.

"Moreover, the owner and the architect have the full co-operation of the builder both in working out construction problems and in the conduct of the work. "Definite economies are made possible by the preparation of responsible estimates by the builder to guide the cost of the work during the development of the plans and specifications and through the adoption of specific methods of construction under which the particular builder can operate most effectively and economically. The builder is afforded the opportunity to plan carefully and schedule the various operations well in advance of the actual construction, thus eliminating uncertainties and assuring a systematic operation.

"During the period of the development of the plans and specifications, markets can be studied so as to take advantage of favorable opportunities in the selection and purchase of materials. This is particularly important in times like these.

"It is obvious that the selection of a properly qualified builder is of the utmost importance. Salient points determining his selection should be concerned with his record on both fee and lump-sum contracts; his relationship in the past with owners and architects; his organization and personnel; his method of operation; his financial status and his credit record."

According to Mr. Turner, the attitude of the Bureau of Yards and Docks of the United States Navy with reference to its cost-plus-a-fixed-fee policy was admirably summed up recently as follows, in a booklet which states:

"A correct concept of the government cost-plus-a-fixed-fee contract involves three vital propositions. First, the contracting officer representing and speaking for the United States, and all of his administrative assistants, must be competent and possess a clear understanding of the peculiar relationships of the parties to the contract. Second, the contractors must be experienced, reliable, and conscientious, energetic, resourceful, and also have a clear understanding of the peculiar relationships of the parties. Third, there must be a high degree of cooperative confidence and trust by each of the parties in the other and this confidence and trust must extend throughout the organization of each party."
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**How Builder O'Neill Sells**

(Continued from page 40)

the basement as to make most of the basement space usable. Bathroom fixtures are by Kohler. We use rock lath, Lockaire or Fir-Tex wall construction, on cement block foundations. Rock wool insulates the ceilings."

Another feature that invites favorable consideration of his homes is the large size of the lots he chooses to build on. They are never less than 40 feet. Those in the 1940 project are 43 x 129 feet, allowing over 16 feet between houses.

When a project is contemplated, the material for the entire undertaking is purchased at once and held by the respective suppliers until wanted. The ordering out of needed supplies is thoroughly systematized. As each progressive step is taken in construction of the building, the supplies are ordered by lot number.

For instance, when a certain house is ready for roughing, the office merely telephones the lumber yard and specifies the lot number where the supplies are needed. The yard, having a complete list of measurements of all the various requirements, selects the full complement of lumber intended for the roughing-in of the specified house and delivers only that much. Each supplier knows exactly what supplies must be furnished to complete each particular step in the construction of each house. The builder's office is not required to enumerate all the different items when additional supplies are called for.

Since the lumber is estimated on exact sizes required and is delivered when needed, there is very little, if any, waste. Furthermore, the practice of delivering materials to the job piecemeal reduces to a great extent losses from pilferage on the job.

It is easily realized that this whole plan is designed to cut all corners in order to achieve all possible savings.
both in time and materials. Having all construction work concentrated in one area also helps to effect these desired results.

By specializing in one standard floor plan, deviating from it only in cases where suggested changes would involve little extra work to satisfy an owner's individual requirements, Mr. O'Neill is able to follow pretty well a standardized routine which makes for smooth efficiency and economical construction. This reflects itself to advantage in the final selling price and permits him to give the public what is looking for in homes priced well below $6,000.

The O'Neill organization maintains its own display rooms for bathroom fixtures, lighting fixtures, tile, linoleum, shades, etc., where the home-buyers are given the opportunity to choose their interior appointments. Newspaper advertising serves a good purpose, in Mr. O'Neill's opinion. Instead of starting out aimlessly on a Sunday on an expedition of “looking,” the home-seekers use the O'Neill advertisement as a stimulus which directs them to a specific destination.

Of the many telephone inquiries received from prospective purchasers, one out of ten are converted into buyers. All the deals are closed in Mr. O'Neill's office by Mr. Dennis O'Neill. He has no selling organization.

As an extra measure of service in an effort to make sure that buyers are satisfied, Mr. O'Neill sends one of his men to the new house-owner, two weeks after the latter has moved in, for the definite purpose of asking the owner to check anything that may be wrong. The list is picked up a day or two later and arrangements are promptly made to correct even the most minor complaints.

This is, it may be assumed, an important link in building a chain of 10,000 customers, which most builders will agree is a goal well worth attaining!
8 Machines in One!
And each of the eight is full-sized and independently operated. Does complete job from rough lumber to finest trim and finish.

NEW MODEL "A" PLAINING MILL SPECIAL
Low in cost and in operating expense. Takes small space because of compact build. Built for long, hard service.

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Frame a piece of 1" insulating board with 1" x 2" wood, letting in extra wood for the lock. Casco-glue a 3-ply plywood panel on each side covering the fibreboard and frame. Use "c" clamps at the edges, weights over the center. Send for free "Casco Gluing Guide". Contains illustrated directions for flush door construction and other Casco uses in building and shop work. Address — Casco Company of America, Dept. AB 250 Madison Avenue, New York City
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